

# **Nepal**

## **Bridge Development Program: Environment and Social Systems Assessment (ESSA)**

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**Prepared by the World Bank**

## Acronyms Used in this Report

<b>AAPA</b>	<b>Aquatic Animal Protection Act</b>
<b>ADB</b>	<b>Asian Development Bank</b>
<b>AMPA</b>	<b>Ancient Monument Preservation Act</b>
<b>BIMPS</b>	<b>Bridge Improvement and Maintenance Program Support</b>
<b>CDO</b>	<b>Chief of District Administration Office</b>
<b>CFC</b>	<b>Compensation Fixation Committee</b>
<b>CLA</b>	<b>Child Labor Act</b>
<b>DAO</b>	<b>District Administration Office</b>
<b>DLI</b>	<b>Disbursement Linked Indicator</b>
<b>DLRO</b>	<b>District Land Revenue Office</b>
<b>DLSO</b>	<b>District Land Survey Office</b>
<b>DOR</b>	<b>Department of Roads (Ministry of Planning and Works)</b>
<b>EIA</b>	<b>Environmental Impact Assessment</b>
<b>EPA</b>	<b>Environmental Protection Act, 1996</b>
<b>EPR</b>	<b>Environmental Protection Rules, 1997 (amended 1999)</b>
<b>ESMF</b>	<b>Environmental and Social Management Framework</b>
<b>ESSA</b>	<b>Environmental and Social Systems Assessment</b>
<b>FA</b>	<b>Forest Act</b>
<b>GESU</b>	<b>Geo-Environmental Systems Unit</b>
<b>GON</b>	<b>Government of Nepal</b>
<b>IEE</b>	<b>Initial Environmental Examination</b>
<b>LAA</b>	<b>Land Acquisition Act 1977</b>
<b>MOE</b>	<b>Ministry of Environment</b>
<b>MOFSC</b>	<b>Ministry of Forest and Soil Conservation</b>
<b>MoPPWTM</b>	<b>Ministry of Physical Planning, Works and Transport Management</b>
<b>NFDIN</b>	<b>National Foundation for the Development of Indigenous Nationalities Act (2002)</b>
<b>NPWLCA</b>	<b>National Park and Wildlife Conservation Act</b>
<b>NPC</b>	<b>National Planning Commission</b>
<b>PforR</b>	<b>Program for Results</b>
<b>PWD</b>	<b>Public Works Directive</b>
<b>PIP</b>	<b>Priority Investment Plan</b>
<b>RSDP</b>	<b>Road Sector Development Project</b>
<b>SRN</b>	<b>Strategic Road Network</b>
<b>VDC</b>	<b>Village Development Committee</b>

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## **Section I. Executive Summary**

### **Purpose of ESSA**

The purpose of the Environmental and Social Systems Assessment (ESSA) is to: (i) document the environmental and social management rules and procedures and institutional responsibilities that is being used by the Government for the SRN bridges program (ii) to assess implementing entities institutional capacity including performance to date to manage the likely environmental and social effects in accordance with Nepal's own requirements under the program; and (iii) to recommend specific actions for improving counterpart capacity during implementation.

The ESSA is a World Bank document prepared by Bank staff and consultants through a combination of reviews of existing program materials and available technical literature, interviews with government staff, and consultations with key stakeholders and experts. Findings of the assessment will be used for the formulation of an overall Program Action Plan with key measures to improve environmental and social management outcomes of the Program. The findings and conclusions and opinions expressed in the ESSA document are those of the World Bank. Recommendations contained in the analysis will be discussed and finalized with the Government of Nepal counterparts.

### **Program Objectives and Components**

The Bridges Improvement and Maintenance Program (BIMP) operation will support the Government of Nepal's program of investment in bridges on the Strategic Roads Network (hereafter the SRN Bridge Program or Program). The Department of Roads (DOR) manages this program as a part of its overall program of capital investment in Nepal's road and bridge infrastructure. The scope of the SRN Bridge Program encompasses three primary activities: (i) planning, technical design and quality control of bridges; (ii) major and minor maintenance of existing bridge assets; and (iii) new bridge construction. The SRN Bridge Program will exclude bridges that, in the opinion of the Bank, are likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people. The current estimate suggests that a total of approximately 24 (out of 760 potential Program interventions) existing or planned bridges will be excluded under the SRN Bridge Program because they are within national park boundaries. This is just over 3% of the total interventions planned under the SRN Bridge Program. Most bridges in Nepal's environmentally sensitive areas are lower priority or are likely to be financed by other sources. Excluding them will not undermine the integrity of the Program.

### **Methodology**

In developing the ESSA, the Bank undertook the following: (i) reviewed existing policies, state development plans, acts, regulations, frameworks and guidelines; (ii) conducted meetings and interviews with different stakeholders ranging from central level agencies to local level agencies, particularly those involved in the environmental and social assessment as well as planning, implementation and monitoring of transport sector projects including bridges; (iii) assessed the environmental and social management system in place relative to the principles outlined in OP/BP 9.00; (iv) assessed the capacity and performance of DOR, (v) identified measures to enhance environmental and social management capacity and performance; and (vi) developed recommendation for performance monitoring and support during implementation.

## **Environmental and Social Effects of the BIMPS Program**

### *Environmental Benefits and Risks*

Given the program scope, coverage and size of the bridges under the BIMPS the anticipated adverse environmental issues and impacts related to program implementation are expected to be limited in nature and are not expected to pose a significant risk. The program activities will not encroach upon or degrade the sensitive habitats by not including any bridges located in the sensitive areas of floral and faunal biodiversity value or in a protected area. Nevertheless, minor implications on the existing vegetation cover (limited to the bridge abutments locations) and on the aquatic ecology (limited to a few hundred meters upstream and downstream of the bridge crossings), needs to be given due attention from the natural environmental perspective depending upon the bridge site locations. Impacts associated with the bridge repairs and construction are not complex and can be readily managed with known mitigation and management techniques provided contractors take care to implement agreed mitigation measures.

At the same time, the program is expected to deliver a number of environmental benefits. The repair and maintenance of bridges will ensure that the risks of bridge failure are reduced and that erosion and sedimentations are minimized through repair of failing foundations and river training or abutment works. Improved performance of the DOR with respect to environmental planning and management will help to ensure that issues are identified earlier and more consistently and that contractors will be supervised more regularly and environmental provisions of contracts enforced more consistently.

An important issue of concern related to the bridges during construction is the construction impacts associated with dredging, foundation works, or river bank reinforcements which may affect aquatic biodiversity. Also of concern is the occupational health and safety of the construction workforce. A similar issue is the community health and safety related to traffic accidents during the operation phase of the program, as adjoining areas of bridge abutment locations are invariably occupied by encroachers for market development throughout Nepal. Field observations have shown that waste management, from the construction activities as well as from the labor-camps, is commonly poor. In some of the bridge locations pressures on the surrounding environment (extraction of sand and gravel, pressures on local forests) have continued after construction has completed.

Although from regulatory and legal provisions and operational guidance perspective Nepal's environmental management system are consistent with the principles outlined in OP/BP 9.00, field implementation is not optimal. The issues linked to operational performance of environmental impact of bridges include partial application of environmental screening and the rarity of a standalone environmental impact assessment (EIA), the absence of specific environmental mitigation requirements for bridges in the ESMF, inadequate alternative analysis (only covers design and "no project" alternatives), focus of the impact identification is mainly on the direct impacts (coverage of indirect, cumulative and trans-boundary impacts is rare), non-inclusion of environmental mitigation costs in bid documents and poor environmental management and mitigation during construction of bridges, and lack of environmental monitoring (except donor funded projects)..

### *Social Benefits and Risks*

The bridge development program is anticipating limited adverse impacts of land acquisition and resettlement confined to the area near bridge works. Based on past experiences adverse social impacts are likely to be temporary during project works, such as temporary land leasing for the contractor operations. However, the bridge program will include some new bridges to be constructed which may require land during bridge construction and for access roads development. However, not all bridges would involve land acquisition or resettlement issues as many of these bridges are in remote and sparsely populated areas where public land is plenty and chance of affecting private property is quite small.

With the aim to improve access of communications, the bridge program will benefit a large number of communities, particularly those with no or little access and isolated in remote areas. This is particularly so with indigenous communities which are among the targeted beneficiaries of the bridge program. Indigenous peoples, or Adivasi Janajati in Nepali, accounts for about one third of the population in Nepal. Any development interventions are bound to come across indigenous communities. Past experiences show that indigenous communities demand and support such programs to improve their road access that is vital to public services and economic development. However, bridge rehabilitation and construction activities may also have adverse impacts upon nearby indigenous communities as a result of land acquisition, public health impacts, noise and traffic safety impacts.

The key shortcomings of the management of the country social impacts, which are also relevant to the bridge program, are: (i) national programs do not provide adequate focuses on vulnerable communities. For instance, the development of vulnerable community development plans is only limited to internationally financed operations; (ii) existing laws of Nepal do not have provisions of assistance to squatters and compensation amount required for restoration of livelihoods and replacement costs of the properties. However, in many cases such assistances/compensations are provided informally; (iii) Nepal practices, especially in the case of community projects (e.g. schools, local roads), the notion of land donations. This is more relevant in the case of projects in rural areas.

However, apart from internationally financed project such practices are hardly regulated and formalized (e.g. non-transfer of legal titles); (iv) It is not necessary under the national policy requirements to separately document plans linked to social issues and, social issues (e.g. issues linked to land compensation and indigenous people) are subsumed under the environmental screening, assessment and documentation process. (v) no grievance handling mechanism exists at the operational level. The only legal avenue exists for any aggrieved person or entity is the use of formal legal system (i.e. courts), irrespective of type of grievances or sectors. The common practice is that grievances are generally addressed locally, though informally, by the local administrations or DOR officials.

#### *The Environment and Social Management Framework (ESMF)*

The DOR has an existing ESMF which provides the environmental and social procedures, practices, mitigation measures and analytical approaches for road projects. The ESMF has been reviewed, evaluated and endorsed by the Ministry of Physical Planning and Works and since 2007 has been a key document guiding the DOR projects funded by international donors. The ESMF is grounded in relevant national environmental and social legislation and regulations and has legal authority within the Ministry. The ESMF covers the national legislative framework; potential environmental and social impacts of road projects; consultation requirement; standards for land acquisition, compensation and assistance; standard impact mitigation measures; and treatment of vulnerable communities including Indigenous Peoples. The ESMF is comprehensive in scope with respect to roads and most of the aspects of the ESMF are applicable to bridges. However, the ESMF was not designed to take into account the bridge program and revisions will need to be made to some elements of the ESMF to ensure that environmental and social aspects of bridge maintenance, repair and construction are fully incorporated. The ESSA report makes specific recommendations on the changes needed to the ESMF to take into account bridge impacts.

#### *Consultations and Information Disclosure*

The ESSA report considers consultation, stakeholder involvement and disclosure of information from two perspectives. First, the report examines the requirements of the GoN and DOR with respect to individual sub-projects, evaluates the extent to which DOR practices are effective and consistent with OP/BP 9.00. , and provides recommendations for improving the performance by the DOR.. Second, the ESSA itself was the subject of public consultation meetings held in Kathmandu and Pokhara on April 23 and 25, 2012

respectively. The Bank sponsored two multi-stakeholder workshops to solicit specific feedback on the findings and recommendations of the draft ESSA and a detailed description of the workshops, participants, and main issues raised is provided in Section VIII of the final version of the ESSA. .

The consultations held provided more detailed information on the PforR instrument, the bridges improvement and maintenance program to be supported using PforR, and key findings and recommendations of the ESSA. Overall the participants were supportive and asked a variety of questions and commented on many specific aspects of the Program. Some of the general themes which raised in the questions of participants include: how the DLIs will be developed and decided between the World Bank and GoN, how consultation and land acquisition will be handled under BIMPS; how the environmental and social standards under PforR policy relate to the Bank's investment lending safeguards policies; how will program screening and alternative analysis be conducted; and what will the role of GESU under the Program.

### **Recommendations for Environmental and Social Actions**

The ESSA concluded that the overall environmental and social system of the DOR are considered acceptable for use under this PforR operation Nevertheless, the ESSA report makes a number of important recommendations for addressing institutional capacity constraints and gaps across a range of environmental and social management system constraints. These recommendations are summarized briefly below.

Updating the DOR ESMF to include DOR Bridge Program: The existing DOR ESMF was developed and issued in 2007 and was mainly developed for DOR road program, including new constructions and rehabilitation. This ESMF was developed on the basis of relevant government policies, taking into consideration of international good practices, including relevant ADB and World Bank policies. Review of the ESMF revealed some gaps and identified areas of improvement in line with OP 9.00. . The ESMF will need to be updated to cover elements of the DOR bridge program. . The updating of the ESMF will include a technical review and revision and formal endorsement within DOR. This is ongoing and expects to be completed soon.

Strengthening environment and social impact management within DOR: Currently, GESU seems to be responsible for managing environmental and social issues within DOR. However, GESU sits on a back-bench in DOR operational decisions and implementation and is greatly constrained in performing its responsibilities due to the limited allocation of financial and human resources. These indicate a lack of adequate attention within DOR to the management of environmental and social impacts in its investment subprojects. In order to address this, it is recommended that DOR elevate and authorize GESU officially as the mandated and responsible unit within DOR for the management and performance of the environmental and social aspects of DOR road and bridge operations both in preparation, planning, and implementation monitoring. This needs to be achieved through a decision note within DOR. It was agreed that this decision note will be issued by end October 2012.

Strengthening GESU: In order to perform its responsibilities, GESU will need to be strengthened in terms of staffing, financial resources, its internal operating arrangements and coordination with other technical units and ministries. In this regard, DOR will need to develop an operational plan to strengthen GESU. This plan will be agreed with the World Bank for its implementation and will be monitored during implementation. This plan will include

- Staffing arrangements, including outsourcing, and a schedule of their recruitments
- Annual financial allocation forecast and allocation for the next three years

- GESU operation plan for the bridge program. This plan should describe its responsibilities, staffing (number, specialization and qualification), staff assignment, operating methodologies,



## **Section II. Introduction**

**2.1 Background.** The Government of Nepal has defined a national Strategic Road Network (SRN) consisting of Highways and Feeder Roads under the auspices of central government. The Department of Roads (DOR) under the Ministry of Physical Planning and Works is given the mandate of planning, construction and maintenance of the SRN. The SRN currently suffers from many gaps in continuity and assured access due to non-existent or inadequate bridge structures. Many existing bridges are 35-40 years old and are in desperate need of rehabilitation and repair. To address this problem, the DOR has formulated a Priority Investment Plan (PIP) for bridges that aims at achieving year-round accessibility along the SRN. Under the PIP, the DOR has identified a backlog of bridges for maintenance and refurbishment as well as about 350 new bridge development projects. To address these needs, a Bridge Improvement and Maintenance Program Support (BIMPS) is being prepared and is proposed for World Bank financing using the Program for Results (PforR) lending instrument.

**2.2 Objectives and Scope of the ESSA.** The PforR lending instrument emphasizes the disbursement or loan proceeds against a set of performance indicators and not against specific investments or transactions. Unlike conventional investment lending, implementation under PforR relies to a great extent on existing counterpart procedures and processes that are used to manage social and environmental effects of program activities. The Environment and Social Systems Assessment (ESSA) has been developed with a view to providing a comprehensive review of relevant government systems and procedures followed by the Nepal Department of Roads (DOR) to address social and environmental issues associated with its bridge development program. The ESSA describes the extent to which the applicable government social and environment policies, program procedures and institutional systems are consistent with the core principals and elements of PforR lending, and recommends necessary actions to address the gaps as well as opportunities to enhance performance during implementation.

Specifically, the objectives of the ESSA are to:

- Review the existing environmental and social management systems applicable to the BIMPS;
- Review of national legal policy framework related to management of social and environmental impacts in transport sector, specifically for bridge construction and maintenance that the program is supporting;
- Review and assess the institutional capacity of various relevant agencies involved in the environmental and social impacts management within the program system;
- Review and assess the program system performance at all levels including planning, implementation and monitoring of bridge projects;
- Recommend actions to improve the performance of existing systems against the specific requirements of Nepal as well as the core principles of PforR instrument.

**2.3 Methodology:** The ESSA was developed based on: (i) a review of existing policies, state development plans, acts, regulations, frameworks and guidelines; (ii) meetings and interviews with different stakeholders ranging from central level agencies to local level agencies, particularly those involved in the environmental and social assessment as well as planning, implementation and monitoring of transport sector projects including bridges; (iii) an assessment of relevant environmental and social management systems relative to the PforR principles; iv) an assessment of the capacity and performance of DOR relative to their own procedures and processes; (v) development of an action plan to enhance environmental and social management capacity and performance; and (vi) development of performance monitoring and implementation support program. The formulation of the ESSA was informed by a consultative process involving key national and local stakeholders. Consultation workshops were carried

out in Kathmandu and Pokhara in April 2012 to better understand the environmental and social concerns of stakeholders and to seek feedback on the findings and recommendations of the ESSA team.

### **Section III. Description of the BIMPS.**

#### **3.1 BIMPS Scope and Coverage.**

Program overview: The Bridges Improvement and Maintenance Program (BIMP) operation will support the Government of Nepal's program of investment in bridges on the Strategic Roads Network (hereafter the SRN Bridge Program or Program). The Department of Roads (DOR) manages this program as a part of its overall program of capital investment in Nepal's road and bridge infrastructure. Over the last five years the bridge program has had increasing political attention supported by increasing budget allocations. In part this is because of some high profile bridge failures which have highlighted the urgent need for addressing the backlog of maintenance and repairs. The process of political transition also demands that remote areas are connected to the rest of the economy and bridges are often the missing link on an otherwise complete network.

Nepal's Strategic Roads Network (SRN) includes approximately 10,835 km of existing roads, 769 km of roads under construction and 2,509 km of planned roads. The SRN is different from Nepal's other road and bridge transport infrastructure because of its critical role in national economic activity and social development. SRN roads comprise Nepal's primary corridors for trade and economic activity. The East West Highway (SRN road H001) is particularly important in this regard. Similarly, SRN roads form the key linkages providing socially important connectivity between Nepal's development regions. The current and planned SRN is essential for ensuring the sustainability of hard-won peace and stability by providing connectivity to post conflict areas in line with the GoN's strategy of inclusion. Bridges are essential for providing year round access on the SRN. Heavy rains render shallow rivers and drainages impassable during the summer months on SRN routes that lack bridges.

The scope of the SRN Bridge Program encompasses three primary activities: (i) planning, technical design and quality control of bridges; (ii) major and minor maintenance of existing bridge assets; and (iii) new bridge construction. There are also a number of complementary activities that fall outside the scope of the Program, and relate to the overall DOR road and bridge program. These activities include DOR's Annual Road Maintenance Plan which is funded and monitored by Roads Board Nepal and does include some routine maintenance activities of bridges on the Strategic Road Network.

Department of Roads has identified the following medium-term goals to make progress against intended SRN bridge-related outcomes: (i) completing all urgent major maintenance requirements; (ii) completing the current backlog of unfinished bridges already under construction; (iii) reducing the accumulated backlog of major maintenance requirements; (iv) undertaking minor and routine maintenance to prolong existing asset lives; and (v) continuing to develop economically and socially important new bridge crossings. The Bank's operation will support the Department of Roads in developing more explicit quantitative targets for Program results.

Sound investment planning and improved implementation procedures are critical for the Program's success. While bridges do require specialized expertise and some pose significant engineering challenges, most bridges under the Program are relatively small and involve straight-forward engineering design. The existing stock of bridges on the SRN has an average span of 43 meters, 47 percent are single span (average length 22 meters) and only about 10 percent have 6 or more spans (average length of 214 meters). Cost estimates for the Program suggest that for 71 percent of SRN bridges requiring urgent major maintenance, the costs will be less than US\$250,000 per bridge. Similar estimates suggest that 85 percent of new bridges are likely to cost less than US\$1 million per bridge. The single most expensive bridge that is being considered is estimated to cost US\$8 million. Costs of engineering designs, feasibility studies, and quality management are estimated to be approximately 5-6 percent of civil work spending.

The SRN Bridge Program will support Government's efforts to clear the backlog of urgent and major maintenance, which over time will reduce the overall maintenance burden for bridges. That said, there are still huge needs in the sector and limited resources and capacity. It is expected that the Government will continue to rely on donor financing and technical assistance in the foreseeable future. The other key to sustainability is ensuring high-quality construction and good bridge asset management. Through the institutional strengthening supported by the Program, the management capacity of Department of Roads and other implementing agencies will be enhanced, so that these agencies can better carry out the responsibilities for management and delivery of services.

*Program scope - Planning, technical design and quality management:* A minimum of 5 percent of its civil works budgets (US\$7.4 million over the Program support period) will be budgeted for activities to plan, prepare, supervise and monitor the civil works, including social and environmental aspects. This will include funding for consulting services to prepare detailed engineering designs, supervision of bridge construction works, quality assurance and monitoring, data collection linked to bridge conditions and maintenance of the Bridge Management System, auditing and verification, training and miscellaneous activities.

*Program scope - SRN bridge maintenance:* The SRN Bridge Program is expected to focus on approximately 98 bridges (about 6,225 meters) that urgently need major maintenance in order to prevent impending failures. Many of these bridges are considered structurally unsound and therefore unsafe. The Program will also complete major maintenance (233 bridges; totaling 10,900 meters in length) and minor maintenance (95 bridges; totaling 3,500 meters in length) on bridges that are in relatively stable condition.

*Program scope - SRN bridge construction:* The SRN Bridge Program will construct approximately 121 new bridges (6,000 meters). This total includes approximately 95 bridges (5,000 meters) in existing DOR backlog of bridge construction. In addition, a total of 26 new bridges (1,000 meters) on existing gaps will be constructed.

*Program exclusions:* The SRN Bridge Program will exclude bridges that, in the opinion of the Bank, are likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people; or involve procurement of: (i) works, estimated to cost \$50 million equivalent or more per contract; (ii) goods, estimated to cost \$30 million equivalent or more per contract; (iii) non-consulting services, estimated to cost \$20 million equivalent or more per contract; and (iv) consultants' services, estimated to cost \$15 million equivalent or more per contract. The current estimate suggests that a total of approximately 24 (out of 760 potential Program interventions) existing or planned bridges will be excluded under the SRN Bridge Program. This is just over 3% of the total interventions planned under the SRN Bridge Program. Most bridges in Nepal's environmentally sensitive areas are lower priority or are likely to be financed by other sources and their exclusion will not undermine the integrity of the Program.

#### The proposed operation *will support*

- Bridges on Strategic Road Network only;
- Protection, repair and maintenance of existing bridges;
- Construction of new bridges;
- Bridges unlikely to lead to significant conversion of natural habitats (or not located in the protected areas).

#### The Proposed Operation *will not support*

- Bridges that require significantly altering or impacting the hydrology or hydro-geological impacts in the river;
- New bridges that will require new road alignment or long approach road for connectivity;

- Any new bridge construction that may cause potentially significant and adverse environment or social impacts;
- Any new bridge construction inside protected areas or reserved forests.

*Main Benefits of the SRN Bridge Program.* The main beneficiaries from the SRN Bridge Program will be road users who will benefit from year-round access on structurally safe bridges to social and economic facilities and services. Given the network wide nature of the Program, the beneficiaries will include all road users in the country including transport operators (both freight and passenger) and the women, children, poor and physically-challenged persons that use their services. The new bridge construction in the remote areas of the country will benefit an estimated 3 million people, either directly or indirectly. Evidence suggests that improved physical access to health facilities and educational institutions will particularly benefit women, especially during the rainy seasons. Investment in the Program will generate approximately 12 million person-days of employment including long term maintenance work. Women are expected to get a fair share of these opportunities. A separate impact evaluation study, planned under the Program, will estimate the actual benefits to various social and gender groups.

### **3.2 Implementing Agencies and Partners for BIMPS**

18. A dedicated Kathmandu-based team within DOR, known as the “Bridge Project,” manages the overall SRN Bridge Program. Although labeled as a ‘project’ for administrative purposes, this unit has a long term programmatic mandate for managing SRN bridge policy, strategy, technical standards, and physical assets themselves. The Bridge Project directly implements a small number of bridge investments (mainly complex and high value bridges). DOR’s regional directorates and divisional offices are responsible for executing the majority of construction and maintenance contracts once the Bridge Project has vetted the corresponding technical designs.

DOR’s Geo-environmental and Social Unit (GESU) handles the environmental and social aspects of bridges under the SRN Bridge Program. Staff assigned to the Bridge Project coordinate with GESU for environmental screening of individual projects and for outsourcing consultants to undertake environmental assessment. GESU is the primary entity within DOR for environmental and social review and reviewing EA assessments. GESU forwards EA documents to the Ministry of Physical Planning, Works and Transport Management and the Ministry of Environment for final approval. GESU prepares Environmental Management Plans and acts as DOR’s lead entity for environmental and social management during project implementation.

## **Section IV. Anticipated Social and Environmental Effects of the SRN Bridge Program**

### **4.1 Potential Environmental Benefits and Risks**

The anticipated adverse environmental and social effects of the SRN Bridge Program are not expected to be significant considering: (i) that most proposed works are on existing structures where the incremental effects are likely to be small; (ii) the limited geographic footprint of planned works; (iii) the nature of works which focus primarily on repair and maintenance; and (iv) mitigation measures are known and effective provided proper care and oversight during construction. Program activities are unlikely to encroach upon or degrade sensitive habitats because the program excludes any bridges located in sensitive areas of biodiversity such as protected national park areas. Adverse environmental effects of the bridge works are likely to be temporary in nature but depending on local conditions may have implications for the following issues to varying degrees.

*Change in morphology, longitudinal profile and hydrological character of river:* This is possible due to narrowing of river, construction of piers and guide bunds or flood protection/stream bank protection works along the river banks for the protection of bridge from floods. The effect, in the case of medium and small bridges being considered under the current program, is likely to be more pronounced around the bridge location. The effect could be seen up to few hundred meters, typically up to 500 m, upstream and downstream depending on the nature of site and river as well as details of bridge and associated works. The extraction of sand and gravel from the river during bridge construction is another reason for such changes. The extraction of sand and gravel could continue even after completion of the bridge construction as the access road developed during construction may remain usable afterward. The field observation note (Annex 2) indicates the nature of impact on river morphology and hydrology due to the type of bridges being considered under the current program. The type and location of foundation works could lead to modification of flood plain and river bed and affect landscape and aquatic ecology. However, the proposed scope of work that mainly involves rehabilitation and maintenance of bridges is unlikely to cause any significant or irreversible change in morphology, longitudinal profile or hydrological character of river.

*Adverse effects on aquatic life:* Sand and gravel extraction, initiated during construction, is a main cause for loss of habitats including spawning grounds, and feeding grounds of aquatic life (fish/aquatic insects/phytoplankton/zooplanktons). The changes in river morphology, longitudinal profile and depth and velocity of water flow discussed above may also lead to adverse impacts on the aquatic life. Elements of bridge structures may also act as a barrier to fish movement depending on their design. This could be particularly relevant if there is vertical drop at the river-bed across the river. The pollution or degradation of water quality due to construction wastes and sounds/vibration produced in river water during construction may also affect fish and other aquatic life. Construction workers may also fish near their work sites. The effect is likely to be felt few hundred meters upstream and downstream of the bridge location. The significance of such effects will depend on whether the river is a habitat of protected, endangered or rare species or whether the bridge site is on the migration route of migratory species. Adverse impacts could be minimized using standard practices.

*Effects on forest and wildlife:* Direct loss of trees and vegetation is possible when a bridge and/or approach road is located in the forest. During construction, vegetation may require clearing from the construction site which may result in direct loss of standing trees. This is possible around bridge abutments and approach roads, if these are located in forested areas. Induced impacts on nearby forests are also possible due to fire-wood demand of workers during construction, and of road side restaurants and business that usually start during construction which may continue after construction. Other types of induced impacts during operation phase could result from improved access – in some situations, an otherwise inaccessible forest may become accessible on account of a new bridge. Adverse impacts on the

trees and vegetation may also include impacts on rare, endangered, indigenous floral species of conservation significance provided these species are present in the impacted forests. The impact on forest would also affect wildlife and birds in the forest. Hunting by the workers during construction could be a possibility, and construction noises may also disturb the wildlife and birds. Impacts on wildlife and birds are likely to be limited as the Program will not support bridges located in protected areas (the recognized wildlife habitat). The potential nature of impacts on forests due to bridge construction is noted in the field observation note (Annex 2). Such adverse impact and habitat destruction will be mitigated by avoiding construction activities on sites in protected areas, critical natural habitats, or reserved forests.

*Occupational health and safety and labor camp issues:* The field visits carried out as part of this assessment to a sample of bridges (similar to those proposed under this Program) revealed inadequate provision and use of safety gear by the workers. Labor camp facilities were found to be of poor quality, with poor quality beds, congested sheds lacking ventilation, unhygienic water & sanitation, etc. The workers health and safety, and labor camps situations described above are, in general, similar in other construction sites in Nepal. These adverse impacts on community, individual and worker safety will be mitigated through a safe design, construction, operation and maintenance of physical infrastructure.

*Implications for physical cultural resources:* SRN road alignments endeavor to avoid sites of archeological, cultural, religious, and historic value. This is fortunate as the SRN Bridge Program's new bridge construction activities will occur along existing road alignments which reduces the likelihood of impacting known sites of cultural, religious, archeological and historic value. A review of bridge IEE reports and observations did not find issues related to physical cultural resources. However, the possibility of "chance finds" cannot be ruled out. Potential adverse effects on physical cultural property will be accounted for and adequate measures will be taken to address such effects.

*Operational phase effects:* The principle operational phase issues relating to bridges are associated with the use and users of bridges. During the operational phase community health and safety related to traffic accidents may be an important concern in some areas. In addition, congestion around the adjoining areas of bridge abutment locations are invariably occupied by encroachers for market development throughout Nepal.

#### **4.2 Potential Social Benefits and Risks**

The SRN Bridge Program may entail impacts associated with land acquisition and resettlement, but these impacts are expected to be limited and minor due to the rehabilitation and maintenance nature as well as the confined physical area of bridge works. Most of the activities will be rehabilitation and maintenance of existing bridges. In these operations, the land acquisition and involuntary resettlement impacts are expected to be almost negligible based on past experiences, and, if any, they are likely to be associated with temporary impacts during project operations, such as temporary land leasing for the contractor operations.

However, since the bridge program will include construction of some new bridges land for new bridge construction and access roads development will be required. While these are anticipated for any civil works, it should be noted that not all bridges would involve land acquisition or resettlement issues as many of these bridges are in remote and sparsely populated areas where public land is available and the chance of affecting private property is small.

*Indigenous peoples:* Adivasi Janajati in Nepali, account for about one-third of the population. Any development interventions are bound to come across indigenous communities. Past experiences show that indigenous communities demand and support such programs to improve vital road access to public services and economic centers. However, bridge rehabilitation and construction activities may also have

adverse impacts upon nearby indigenous communities as a result of land acquisition, public health impacts, noise, and traffic safety impacts.

*Loss of private agricultural land:* This impact is expected to be negligible for rehabilitation or maintenance operations, but might occur for construction of new bridges. However, due to the linear nature and very confined space of construction, this impact is expected to be limited and marginal.

*Loss of structures:* This may happen for bridge rehabilitation operations at bridge abutments, particularly for business structures that are often set up and operating within the Right of Way of the existing road alignment. The number of structures to be affected will be very small due to the small area required for construction and maintenance.

*Acquisition of community land and forest resources:* Past experiences indicate that some of the land takings for bridges may be community lands or community forest areas, particularly in remote locations. But the areas and quantities of land taking is expected to be small for bridge construction.

*Health and safety impacts:* The presence of the construction workforce and construction operations will have implications on public health and traffic safety for communities nearby as well as for the construction workforces themselves. This is generally unavoidable with all construction activities. Most SRN Bridge Program bridges will require relatively small workforces and the scale of corresponding impacts will likely be small and manageable.

Bridge development operations will improve access for many communities. Local indigenous communities will benefit from access improvement as well as employment opportunities. Some of them may be directly affected through above impacts as well. This adverse impact, however, is expected to be limited due to the rehabilitation nature of the projects and the small areas of operation required.



## Section V Assessment of Environmental and Social Management System

### 5.1 Policy and legal framework for the management of social environmental impacts in bridge development in Nepal

**5.1.1 Description of the policy and legal framework.** The Government of Nepal has, in place, a policy framework for the management of social and environmental impacts in the transport sector that includes bridge development. This policy framework consists of a set of national policies and a set of directives, technical manuals, guidelines and management frameworks related to the transport sector, including bridge development. The country's Environmental and Social Management System may be, hierarchically, grouped into three groups: i) National Overarching Policies, ii) Legislative Framework, and iii) Technical Guidelines and Tools.

#### i) National overarching policies.

Following are the key policies with relevance to OP/BP: 9.0 related to the environmental and social effects of the government of Nepal (see *Annex 3 for description*):

- Nepal Environmental Policies and Action Plan (NEPAP) 1993
- The National Transport Policy (NTP), 2001
- Nepal's Interim Constitution (NIC) 2007
- Three Years Interim Plan (TYIP), 2011/13

Apart from the above, there are also periodic national development plans (long term and interim) that highlight the key environmental and social policies of the government for the planning period. Such plans provide guidance and direction for the prevention, protection, mitigation and management of adverse environmental and social issues that emerge during the course of project development.

The Interim Constitution of Nepal (2007), the development plans including current Three Years Interim Plan (2011/2013), Environmental Protection Act and Nepal Environmental Policies and Action Plan (1993) provide a broad basis for environmental and social management in Nepal. These umbrella policies, in general, promote prevention of adverse impacts, protection and sustainable use of natural resource, equitable distribution of benefits, balancing development and environmental conservations etc. Nepal is party to, or has ratified, a number of international environmental conventions and treaties demonstrating the country's willingness to follow good international environmental practices.

#### ii) Legislative framework.

Following the overarching national policies, the government has formulated and periodically updated a series of sector acts related to the management of environmental and social impacts relevant to the bridge development. The key acts are listed below and some of them are briefly discussed:

- Ancient Monument Preservation Act (AMPA), 1956
- The Aquatic Animal Protection Act (AAPA), 1960
- National Park and Wildlife Conservation Act (NPWCA), 1973
- Public Road Act (PRA), 1974
- Land Acquisition Act (LAA), 1977
- Forest Act (FA)1993 and Forest Regulation (FR), 1995

- Environment Protection Act (EPA), 1997
- Environment Protection Regulation (EPR) 1997
- National Foundation for the Development of Indigenous Nationalities Act (NFDINA), 2002
- Child Labor Act (CLA) 2001
- Labour Act 1992

The Acts are passed by the parliament, while the Regulations are issued by the Cabinet. The acts and regulations are legally binding.

Environmental Policy. Overall, the environmental policies and legislative framework provide a reasonable basis for addressing environmental issues likely to arise during the SRN Bridge Program. However, environmental policy provisions are scattered throughout several acts and regulations, such as those mentioned above. These acts and regulations, together, provide overall regulatory framework that defines both process and procedures for environmental protection, conservation and management. Article 3 of the EPA makes an Environmental Assessment<sup>1</sup> in the form of Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA) mandatory. The Forest, National Park and Wildlife Conservation, Aquatic Animal Protection, and Ancient Monument Preservation Acts require approval of the respective competent authority if a development project/activity happens to be in the territory of their jurisdiction. These laws emphasize protection and conservation of the natural resources. Annex 3 provides a more detailed description of the policies and legal framework applicable to program activities.

Land Acquisition and Resettlement Policy. The Land Acquisition Act (LAA) 1977 is the overarching policy governing land acquisition under eminent domain. Like many countries, Nepal does not have an explicit national involuntary resettlement policy or Act but some of the key requirements of involuntary resettlement are addressed by LAA. The LAA stipulates the process, procedures and timeframe as well as administrative responsibilities in acquiring private properties (for example: land, house, crops and others) for public purpose. It does not, however, state any provisions for physical resettlement and livelihood restoration of the affected population. The compensation for the land and property is determined by a Compensation Fixation Committee (CFC). The mode of compensation is in cash after deducting the depreciation of the property. This has been the law followed in public capital investments since its issuance.

Indigenous People. The government decreed the “National Foundation for the Development of Indigenous Nationalities (NFDIN) Act” in 2002. The act defines indigenous groups or *Adivasi Janajati* in Nepali as "a tribe or community having its own territory, own mother tongue, traditional rites and customs, distinct cultural identity, distinct social structure and written or unwritten history". The government, through NFDIN, has identified and officially recognized 59 such indigenous communities. This list was updated in 2009 to include 81 groups for official recognition.

The NFDIN established the first comprehensive policy and institutional framework regarding indigenous peoples. The Interim Constitution further recognizes the status of all mother tongues as national languages, enabling their use in the governmental sector, and recognizes the rights of indigenous peoples to “participate in State structures on the basis of principles of proportional inclusion”, and authorizes the State to implement special measures “for the protection, empowerment and advancement of indigenous nationalities”.

In addition to the Interim Constitution and the NFDIN Act 2002, there is other recent legislation that addresses specifically the situation of, and call for specific measures in relation to, the *Adivasi Janajati* and other marginalized groups. These include the Local Self-Government Act (1999); the Three Year

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<sup>1</sup> The EPA uses the term Initial Environmental Examination (IEE) for limited EA and Environmental Impact Assessment (EIA) for full EA.

Interim Plan (2010); the 2007 amendments to the Nepal Civil Service Laws, Military Act and Police Regulation; and the Ordinance on Inclusion in Public Service (2009). The preamble to the Local Self-Governance Act, 2055 (1999) acknowledges the historical exclusion of indigenous communities and the need to incorporate them into the development process. The Civil Service Act includes a quota (reservation) system that specifies: "out of the 45% of new recruitments reserved for various under-represented groups, 27% are allocated to *ethnic groups*". The Police Regulation and the Armed Police Regulation have similar provision, in order to make the police force more inclusive. The Ordinance on Inclusion in Public Service likewise demonstrates attention to the problem of under-representation by providing a quota system that benefits indigenous peoples.

### iii) Technical Guidelines and Tools.

Over the last few decades, a number of technical Guidelines, Directives, Manuals and Frameworks have been developed which are particularly relevant to the transport sector for the purpose of environmental and social impacts management. The most relevant Guidelines, Directives, Manuals and Frameworks for bridge projects are presented below (see *Annex 3*).

- Land Acquisition Guidelines, 1989
- National Environmental Impact Assessment Guideline, 1993
- Environmental Management Guidelines, DOR, 1999
- Policy Document – Environmental Assessment of Road Sector in Nepal, DOR 2000
- Directives on Land Acquisition for Road Sector, DOR, 2002
- The Public Works Directive (PWD) 2002
- Manual for environmental and social aspects of Integrated Road Development, MoPPW/DOR, 2003
- Environmental and Social Management Framework, MoPPW/DOR, 2007
- Working Procedure for the allotment of Forest area land to other Uses, 2006
- Interim Guidelines for Enhancing Poverty Reduction Impact of Road Projects, DOR, August 2007

The technical guidelines and tools, such as mentioned above, are prepared and issued by competent authority (such as a Ministry or a Department) by elaborating and explaining the provisions of acts and regulations as well as incorporating good practices. These are intended for use within the jurisdiction of the issuing competent authority, and are enforceable to the extent these do not contradict with the provision(s) of the mother act and regulation. These guidelines and tools describe the requirements, processes and procedures in more detail than in the act and regulation.

Developed over a period of time (typically with donor support to meet specific project purposes) these documents encapsulate many of the core principles and key elements of OP/BP 9.0. These have been accepted and endorsed by the government for their departmental investment operations. They describe the process and procedures of environmental assessment to ensure integration of environmental consideration in the project survey, design, tender and contract documents.

The Public Works Directive (PWD) 2002 is the most comprehensive document of GON designed to apply uniform procedures for public construction works which also include environmental procedural guidelines which are consistent with the World Bank's best practices. The Environmental and Social Management Framework 2007 of DOR not only provides details of environmental assessment procedures but also stresses on the compliance of environmental as well as social measures for the Sector Wide

Road Program and the Priority Investment Plan for the Strategic Road Network (SRN) for the period 2007 to 2016.

### ***5.1.2 Assessment of Existing Policy and Legal Framework vis-à-vis PforR Principles***

The existing government policy and legal framework on the management of social and environmental impacts generally reflects the PforR principles relating to social and environmental effects. The EPA, 1997 and EPR 1997 is an umbrella environmental act and rules in the country. The EPA/EPR combined with other acts (Forest, National Park & Wild Life Conservation, Aquatic Animal Protection, and Ancient Monument Preservation) cover most of the key principles defined in OP/BP 9.0. The sectoral legislation is older than the environmental act and policies of the government. In essence, the policies and laws, put together, provide guidance and directions for avoiding, minimizing or mitigating potential adverse impacts on natural resources and important natural habitats, for promoting environmental sustainability as well as for ensuring stakeholder participation and information while planning and implementation of development projects/activities. The guidelines and directives mentioned in the previous chapter provide general guidance with regard to communities and workers health and safety in road construction.

The EPA/EPR does not permit implementation of a development activity or project without approval of the respective IEE or EIA, if required. Schedule 1 and Schedule 2 of the EPR elaborates the requirements defining the projects or activities requiring IEE and EIA on the basis of sector, type, size, location, sensitivity and cost. Project with potentially higher environmental risk is required to be subjected to full EIA. For example, any proposal will require full EIA if implemented in protected area, or environmentally weak and wet areas, or in historical, cultural or archeological sites.

Sector laws emphasize the protection and conservation of natural resources, natural habitats (terrestrial and aquatic), protection of physical cultural resources, and avoidance or mitigation of adverse impacts on them. The Forest Act prohibits any activities within the forest area without prior approval of the concerned forest authorities; Forest Regulations as well as Work Procedures require compensatory plantation (1 tree loss to be compensated by the planting of 25 trees). The National Parks and Wildlife Conservation Act prohibits a range of development<sup>2</sup> and other activities within the protected areas (natural habitat) without written permission of the concerned authorities which generally discourages development activities inside the protected areas. Aquatic Animal Protection Act prohibits actions that impinge upon the aquatic life and the Ancient Monument Preservation Act restricts excavations in places where ancient monuments are located and prohibits development works, which may adversely affect ancient monuments, without prior approval.

While the Land Acquisition Act mandates only cash compensation for involuntary resettlement for all sectors, the transport sector has developed, with World Bank and Asia Development Bank assistance, an Environmental and Social Management Framework for DOR operations. This framework has gone beyond cash compensation to include basic objectives, principles and approach for resettlement and livelihood restoration and improvement. This framework has been reviewed and accepted as meeting the requirements with World Bank policy on involuntary resettlement and indigenous peoples. As a DOR sector policy for transport projects, it also reflects the core principles and elements of the OP/BP: 9.0. The challenge, however, is its full and effective implementation.

#### **5.1.2.1 General Environment and Social Principles**

The GON's legal policy framework on environment and social impact management for the transport sector consists of a set of national policies, acts, directives, technical manuals, guidelines and

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<sup>2</sup> Construction of structure, any harm or damage to forest resources and wildlife/ birds, digging, block/divert or adversely affect river/stream etc.

management frameworks. This framework reflects, to various extents, the following core principles of OP/BP 9.00:

- Avoid, minimize or mitigate against adverse impacts
- Promote environmental and social sustainability in program design
- Promote informed decision making relating to a program's environmental and social effects; involving key stakeholders; protecting the rights and interests of indigenous/vulnerable peoples; as envisaged in the core principles of OP/BP 9.0 (*see Annex 3*).

One of the core principles of the environmental policy of Nepal is to integrate the environment and development objectives. This is done through appropriate institutions, adequate legislation, economic incentives, and sufficient public resources (NEPAP, 1993) for the establishment of environmental and social management process and procedures to make the environmental assessment transparent and effective for the mitigation of the adverse effects of development on the natural and social resource base.

The national environmental policies are backed by an umbrella environmental legislation (EPA and EPR) which has established a regulatory authority to guide environmental and social impact assessment at the project level. The umbrella environmental legislation (EPA/EPR), in combination with of sector specific acts, is consistent with the core principles and elements of OP/BP 9.0.

The umbrella environmental legislation (EPA, 1997 and EPR, 1997) sets the process and procedures to avoid adverse effects on natural habitats and physical cultural resources resulting from program activities or investments. The areas of natural habitat and physical cultural resources of historic and archeological significance have been screened as special areas requiring prior permission and approval from the concerned authorities even for the studies for project design (EPA clause 9 & 10, EPR, Chapter 5, and Rule 26 to 33). The projects outside the natural habitat and physical cultural resources areas have to undergo IEE and EIA level EA process as per the environmental screening process stipulated in the EPR (EPR Chapter 3, Rule 3, Schedule 1 and 2). Prior information to the stakeholders with regard to the project to register the comments and concerns of stakeholder is one of key procedures to be complied as per EPR provisions (EPR, Chapter 2, Rule 4(2), 7 (2), and Rule 11 (2)). Apart from this, EPR Chapter 2, Rule 10 mandates submission of the recommendation letters from the local governments of the project implementation areas (Village Development Committees and Municipalities) while forwarding IEE and EIA documents for approval to the concerned authority and Ministry.

The principle of avoidance and minimization toward adverse environmental impacts is not present in explicit terms in the EPA and EPR. The document formats for TORs and reports (IEE and EIA) prescribed in EPR Chapter 2, Rule 5(1), 5(2) and Schedule 3, and 4 and Rule 7 (1) and schedule 5 and 6, however, stipulate that alternative analysis, mitigation measures and monitoring plans be integral parts of the TOR and the respective IEE and EIA documents. This implies that the avoidance, minimization and compensation principles will be followed in the EA process during project preparation and design phase and possibly left for the forthcoming manuals and guidelines under the legislation. Unfortunately, such manuals and guidelines are yet to be framed by the concerned Ministry, the Ministry of Environment.

The EIA guideline (1993) pre-dating the umbrella environmental legislation (EPA and EPR) and sectoral manual/guidelines/directives (Environmental Management Guidelines, DOR, 1997; The Public Works Directive (PWD) 2002; Manual for environmental and social aspects of Integrated Road Development, MoPPW/DOR, 2003; Interim Guidelines for Enhancing Poverty Reduction Impact of Road Projects, DOR, August 2007, Environmental and Social Management Framework, 2007) post dating the umbrella environmental legislation have covered the key elements of the OP/BP 9.0 (these are discussed in sections below).

The umbrella legislation EPA/EPR does not explicitly cover the process and procedures for environmental and social management regarding protection of public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices developed or promoted under the program; (ii) exposure to toxic chemicals, hazardous wastes and otherwise dangerous materials; or (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards. Indirectly, the stipulated formats for TORs and IEE/EIA documents (EPR Chapter 2, Rule 5(1), 5(2) and Schedule 3, and 4 and Rule 7(1) and schedule 5 and 6), do reflect the core principles of OP/BP: 9.0. To minimize the effects of exposure to toxic chemicals, hazardous, wastes and other dangerous chemicals EPR provision in Chapter 3, Rule 15 prohibits emitting waste in contravention to the prescribed standards.

*Resettlement and Land Acquisition:* The LAA is the overarching policy governing land acquisition and involuntary resettlement in Nepal. It mandates cash compensation as the only mitigation measure for acquisition for private land and properties. It does not require or prescribe any mitigation or livelihood restoration measures if required. The institutional mandate and responsibilities are clearly set out in the LAA as far as land compensation payment is concerned, but it does not describe any mandate or responsibilities for planning and implementing livelihood restoration and physical relocation. However, within the transport sector, DOR has developed its own Environmental and Social Management Framework that has gone beyond the LAA mandates to require all options for livelihood restoration and involuntary resettlement to be considered, including cash compensation. It lays out the planning requirements as well as institutional setup to address land acquisition and involuntary resettlement impacts.

The Forest Act (FA) under Chapter 11, Article 49, prohibits any activities within the forest area without prior approval of the concerned forest authorities. However, Chapter 13, Article 68 has a provision to give forest areas for other development purpose provided no other alternative exists and the project cause no significant impact to the forest. This provision mandates for a detailed alternative analysis of the project in question prior to the approval to use the forest land.

The Aquatic Animal Protection Act (AAPA) prohibits actions that impinge upon the aquatic life (Article 5). Prior information to the concerned technical officer impinging on the natural water body is mandated (Article 5B (1) and (2)). The stipulated provisions does not require information on the baseline environment, type of perceived impacts and mitigation in addition to other alternatives available for review assessment to be eligible for development of the project.

The National Park and Wildlife Conservation Act (NPWCA) prohibits entry into the national parks (Article 4) without prior approval of the concerned authority. The Act also prohibits a range of development and other activities (Article 5) within the national parks without permissions of the concerned authorities. The process and procedures to be followed for the development activities are not explicit and are rested on the discretionary powers of the concerned authorities.

The Ancient Monument Preservation Act (AMPA), similar to the NPWCA in protected area, prohibits development works which may impact ancient monuments without prior approval of the concerned authorities (Section 3, Article 5 and 8) but does not provide detail on the process and procedures to be followed for the development activities and therefore rely on the discretionary powers of the concerned authorities.

The Child Labor Act (CLA) under Article 3, Clause 1 prohibits employing any child below the age of 14. However, Clause 2 states that it is prohibited for children below the age of 16 to works in risk prone sectors.

### **5.1.2.3 Assessment of the Country Environment and Social Management System related to Transport Sector vs. PforR Principles and Elements**

The following is an assessment of the GON policies on management of environmental and social impacts relevant to the transport sector, specifically the SRN Bridge Program, compared with the principles and elements in World Bank OP/BP 9.00 to be followed for PforR operations. Nepal's environmental and social management systems that apply to the SRN Bridge Program consist of national legal policies and sector guidelines that are broadly consistent with OP/BP 9.00. However, when reviewed separately, individual laws or policies, may not reflect the entirety of OP/BP 9.00 principles. Some gaps do exist and some lack more specific elaborations. This is particularly so in the case of managing social impacts, such as impacts on those without land title and compensation at replacement cost for structures.

In recognition of these differences, DOR has bridged gaps and provided specific guidance in these lacking areas for its road operations through developing and issuing an Environmental and Social Management Framework which was completed with ADB and World Bank assistance. This document will serve to guide the SRN Bridge Program to manage environment and social issues in accordance with OP/BP 9.00 principles. The ESMF was developed in line with relevant ADB and World Bank safeguard policies and addressed gaps in the national legal framework for dealing with social environmental impacts. The ESMF represents a progressive step towards adopting these principles at national policy level.

#### **A. Environmental Elements**

**Early screening of potential effects:** Environmental screening is required for any development proposals including bridge projects (see Annex 4). The environmental screening identifies activities requiring Initial Environmental Examination (IEE) and those requiring Environmental Impact Assessment (EIA) based on the type of activity, size, investment, and location in the sensitive/protected area. Only major bridges<sup>3</sup> or bridges located in defined sensitive sites (natural habitats and/or areas with physical cultural resources) are required to undergo an EIA process. Other bridges, located outside of sensitive areas or not-classified as major bridges, are exempted from environmental due diligence and overlooks the environmental and social risks at the screening stage (such as impacts on river morphology, aquatic life, forests etc). The screening, IEE and EIA are supposed to be done matching with the project planning, feasibility and detailed design. All bridges proposed under the SRN Bridge Program will be subjected to early screening of potential environmental effect.

**Consideration of strategic, technical, and site alternatives (including the “no action” alternative):** Nepal's environmental system requires alternative analysis of projects that are subject to IEE or EIA (but not those that are exempt from EIA or IEE). The alternatives assessment is required for project design, project size, implementation schedules, raw materials to be used, and no project alternative. The Forest, National Park & Wildlife Conservation and Ancient Monument Preservation Acts support considerations to site alternatives, although not in explicit terms. Consideration of strategic alternatives is not an explicit requirement for the EA process.

**Explicit assessment of potential induced, cumulative and trans-boundary impacts:** The country system explicitly requires identification and prediction of the potential direct and indirect environmental impacts in the project site and its immediate surroundings: the scope of impacts include physical, biological, socio-economic, and cultural environments. Although section 6.2.3 of ESMF provides guidance on a range of mitigation measures to minimize the range of induced and cumulative impacts, assessment of the cumulative and trans-boundary impacts is not explicit.

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<sup>3</sup> Bridge more than 50 m long or more than 25 m span.

**Identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized:** This is a requirement for each project that is subjected to IEE or EIA. National EIA Guidelines, Environmental Management Guidelines, 1997, DOR; Public Works Directives, and the ESMF have made special provisions for the identification of measures to mitigate the perceived adverse environmental and social impacts with list of potential measures for the transport sector as case examples.

**Clear articulation of institutional responsibilities and resources to support implementation of plan:** The project proponent is primarily responsible for implementing the mitigations included in the IEE or EIA. As per the existing regulation, the proponent is also required to make resources available for implementing the environmental mitigation works. The rules, guidelines and frameworks spell out the roles of different institutional stakeholders.

**Responsiveness and accountability through stakeholder consultation:** The EA system requires dissemination of information and stakeholder consultations at different stages of a project that require IEE or EIA. There are legal provisions and guidance in the ESMF and various guidelines. The issues and concerns of the stakeholders are required to be addressed in the respective EA documents. The project subjected to IEE or EIA is required to disclose the information and consult stakeholders. An IEE project would require 15 days public notification and feedback from the stakeholders, likely affected people and local authority. Projects which need an EIA also require similar consultation prior to scoping and writing the TORs, during the EIA field work and the public hearings after the draft EIA Report. EIA Reports are publicly disclosed for thirty day for comments and suggestions.

**Grievance redress measures:** The Environmental and Social Management Framework (2007) Chapter 7 requires establishment of grievance redress mechanism particularly related to the land acquisition and compensation issues. Such redress mechanisms for other issues such as pollution, nuisance, obstruction of access are not envisaged.

**Early identification and screening of potentially important biodiversity and cultural resource areas:** One of the screening criteria in the early phase of project identification as per EPR is the location of the project relative to potentially important biodiversity and cultural resource areas (EPR, Chapter 5, and Rule 26 to 33) and is addressed adequately by all the existing manuals, directives, guidelines and ESMF for the transport sector.

**Program avoids the significant conversion or destruction of natural habitats:** The Forest Guideline for the Development of Projects in the Forest Area, 2006 requires detailed alternative analysis of the projects falling under forested areas. Forest clearance of forest land is only allowed to the developer when the project is of National priority and is not possible without the use of the forest land. The developer of the project is mandated by the guideline for plantation in adjacent degraded land to the minimum of land area equal to the project occupied area. The development projects occupying the forested land also require the planting of 25 trees for every tree cut or damaged by the project. The Environmental and Social Management Framework, 2007, Chapter 6., section 6.2.2, ii, (2) a, b, and c have also listed a range of preventive, minimization and compensatory measures for the conservation, maintenance and rehabilitation of natural habitats.

**Proactive protection, conservation, maintenance, and rehabilitation of natural habitats:** The Forest Guideline for the Development of Projects in the Forest Area, 2006 requires the planting and protection of trees at a 1:25 ratio for every loss of a standing tree of above 10cm DBH. ESMF, Chapter 6 section 6.2.2, ii, (2) a, b, and c have listed a range of preventive, mitigative and compensatory measures for the conservation and maintenance and rehabilitation of natural habitats.



**Takes into account potential adverse effects on physical cultural property:** EPR schedules 1 and 2 requires, as part of EA process, screening of a proposed project for its effects on Physical/cultural resources/sites. Projects in historical, cultural and archeological locations require EIA irrespective of the project nature and size. The Ancient Monument Protection Act, 1956 requires prior approval of the Department of Archeology for the development works. All objects more than 100 years of age are restricted for transfer from site and trade. The Environmental and Social Management Framework, 2007; Chapters 2 and 4 stress the avoidance of sites of cultural and historical importance and if unavoidable requires reporting to concerned authorities as well as on public consultation at various stages of project development to build consensus among the stakeholders, Chapter 6.2.2, ii (3) e have provided preventive, and minimization measures for the protection of physical and cultural property.

**Promotes community, individual and worker safety:** The Environmental and Social Management Framework, 2007; Chapter 6, section 6.2.2, ii, (3) c and d calls for mitigation provisions for the safety of communities and occupational health workers.

**Promotes use of recognized good practice in the production, management, storage, transport, disposal of hazardous materials generated through program construction or operations:** The ESMF, 2007, Chapter 6, Section 6.2.2, ii,(1), m has provided a range of preventive, mitigative, and compensatory measures for the management of explosive, combustibile and toxic materials.

**Measures to avoid, minimize or mitigate community, individual and worker risks when program activities are located within areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather:** Specific provisions for the projects located within areas prone to natural hazards has not been detailed, however, such areas are emphasized for avoidance in the project planning and preparation stage in the Public Work Directive, and ESMF.

The preceding discussion shows that the environmental policy, legal framework, and operational directives and guidelines applicable to the proposed Bridge Improvement and Maintenance Project (BIMPS) are consistent with OP/BP 900. DOR's environmental framework, guidelines and manuals have been prepared for roads but many of the processes and procedures elaborated in the mentioned operational documents are applicable to bridge projects as well. The mitigation measures (particularly related to construction activities, such as waste disposal, workers health and safety, quarrying etc) can be readily adapted to bridge projects. However, these documents have not paid particular attention to the bridge specific planning, design and construction issues – for example impacts on river morphology and aquatic life. Updates to the ESMF can help to address bridge-specific gaps.

## **B. Social Elements**

**Ensure people's participation in devising opportunities to benefit from customary resources/ Indigenous knowledge that are socially and culturally acceptable:** Section 5 of NFDIN Act makes it clear that one major objective of NFDIN is to preserve and promote the traditional knowledge, skills, technologies and special knowhow of indigenous nationalities and to provide assistance in its vocational use. Similarly, the Public Work Directives (PWD) Chapter 4.3 spells out about anticipated adverse impacts on Indigenous People or their cultural heritage while Chapter 4.6 s requires inclusion of the coverage of indigenous peoples through consultations and their participation. The ESMF of DOR Chapter 8.5.3 underscores that in case of land acquisition or structural losses of vulnerable communities including indigenous communities, the Project will ensure that their rights will not be violated and that they will be compensated for the use of any part of their land or property in a manner that is socially and culturally acceptable to them. The compensation measures will have to follow the procedures specified in the Resettlement Policy Framework (RPF), which was developed for the earlier Bank funded project but adopted by the DOR for their departmental investment operations.

**Program planning and implementation for equitable benefits/special measures for vulnerable/disadvantaged groups**

The ESMF of DOR, Chapter 3.7 describes government policies in supporting the vulnerable communities, who are defined as those living in remote locations and who are commonly landless, marginal farmers living below subsistence level and often ex-kamaias (bonded laborers). Formal and informal studies reveal that most of the Janajati, Adhibasi, Dalit and generally women fall under the category of vulnerable persons in Nepal. Women in all social groups and regions have been proven as more disadvantaged than their male counterpart and even among women, widows, separated divorced and women headed households are particularly disadvantaged.

The ESMF, Table 7.2 Entitlement Matrix suggests different types of support measures to different categories of vulnerable groups ranging from training to replacement land and cash assistances for improving or restoring their livelihood. ESMF Chapter 8 is devoted fully on Vulnerable Community Development Framework (VCDF) in SRN program. It identifies the potential vulnerable communities in Nepal (which also equates the indigenous people with ethnic groups (Janajati) and has also classified vulnerable groups into four categories: (i) highly marginalized; (ii) marginalized; and (iii) disadvantaged and (iv) advanced groups.

The IGP/ERIP, Appendix 23 provides more details under Guidance Notes on Vulnerable and Indigenous People Development Plan defining the vulnerable and indigenous people, the rationale of separate plans, methodology, timing and outlines of the plans. Nevertheless, these documents do not clearly describe planning and implementation to projects and programs that ensure equitable benefits to these groups.

**Avoid or minimize land acquisition and related adverse impacts and involuntary resettlement issues:**

The ESMF, Chapter 7.2.1 provides common principles which clearly specify that involuntary resettlement shall be avoided or minimized to the extent possible through the incorporation of social considerations into design options and alignment selections. Where displacement is unavoidable, i.e. people losing assets, livelihood and other resources shall be assisted in improving or at a minimum regaining their former status of living at no cost to themselves. The ESMF, Chapter 6.2.2 (3) b prescribes a set of preventive and mitigative measures to avoid adverse impacts. Preventive Measures include a set of suggestions for avoiding or minimizing losses of land, house and properties of indigenous people which are to be avoided or minimized as far as possible, make adequate provisions and compensation arrangements in the Resettlement Action Plan/ Land Acquisition Plan to satisfy and compensate all indigenous and vulnerable groups in a fair and timely manner.

**Potential economic and social impacts caused by Involuntary taking of land:** The ESMF Chapter 4 describes identification and assessment of potential environmental and social impacts of SRN roads. Section 4.3.3 (a) presents issues about loss of productive lands (b) highlights issues related to land and property acquisition of causing economic losses as well as social and psychological disruption to the affected people and families by involuntary taking of land. The same section further analyzes disruption of community structures and livelihoods while potential conflicts with nearby communities are discussed in clause (d). Likewise, other clauses (e) present impacts on indigenous people and Dalits (f) damages of community infrastructures such as irrigation canal, drinking water supply systems, electric poles, foot trails etc. The ESMF, going beyond the LAA which recognize only titled and legal owners, recognizes those affected but lacking legal titles or rights for resettlement assistance and various benefits.

**Loss of access to natural resources:** ESMF, Chapter 6.2.2 (ii) on adverse impact mitigation measures, subsection 2 (a) suggest a set of preventive and mitigative measures against impacts caused by clearing forest land. Similarly subsection 3 (e) points out about depletion of forest along with the mitigation mechanism by providing support to local communities for preserving their forest resources, especially the community forestry. The Entitlement Matrix Table 7.2 (4.3) suggests possible entitlement provisions viz

replacement of lost community forest and compensation for trees to the forest user groups. The ESMF, Chapter 6.2.3 (3) identifies impacts mitigation related to socio-economic and cultural environment of affected people.

**Provide compensation sufficient to purchase replacement assets (land, houses, other structures, of equivalent value) without deducting depreciation and with proper valuation of assets:** The LAA mandates compensation for land at real market value, which is equivalent to replacement cost for land. Following the LAA, the DOR ESMF has further stipulated the procedures and institutional responsibilities to assess the land compensation prices at real market value. However, the LAA considers depreciation in compensation for structures, and consequently does not provide for replacement-cost compensation for structures. In recognition of this, DOR has recommended in the ESMF in Chapter 7.2 that “practical provisions must be made for the compensation of all lost assets to be made at replacement cost without depreciation or reductions for salvage materials.”

**Provide supplemental livelihood improvement or restoration measures in case of loss of income generating opportunities:** The LAA does not provide for further assistance beyond land compensation for loss of income-generating opportunities for the affected population. To address this, DOR has specifically laid down as a principle in the ESMF that “people losing assets, livelihoods and other resources shall be assisted in improving or at a minimum regain their former status of living. In line with the principle, the ESMF has developed various different types of R&R assistance measures (cash, life skill training, inputs, technology) for the project affective people of different categories. These are described in detail in the Entitle Matrix in Chapter 7.3.

**Restore or replace public infrastructure and services and community services and provide compensatory arrangements if the program imposes new heightened restriction in resource use:** Restoration of damaged public infrastructures and services/ facilities is of critical importance for the maintaining or improvement of livelihood of affected people. The need of restoring the damaged infrastructures/ facilities is explicitly described by ESMF (Chapter 6.2.2 (3) c. The potential infrastructures likely to be damaged affecting people's livelihood include mainly the irrigation canals/ channels, drinking water supply schemes, water ponds, schools, health pots, trails, public buildings and other sites of religious and cultural significance. The section also describes a set of both preventive and mitigative measures. However, it is not explicit about the new heightened restriction in resource use.

**Affected people should be fully informed and closely consulted on resettlement and compensation options:** The ESMF Chapter V describes requirements on public consultations focusing on social and economic development and people's participation at different stages in SRN Sub-Projects. It is emphasized that public participation, consultation and information dissemination must be an integral part in all environmental and social impact assessment at all phases of project cycle – from planning to implementation and monitoring. Concerned stakeholders should be regularly provided needful information about the project and its impacts prior and during the planning and implementation process. The formation of local consultative forums (LCF) is one mechanism emphasized in ESMF to ensure people's participation/ consultations in social planning process including preparation of Social Assessment (SA), RAP preparation and implementation. This group approach is a convenient way of expressing their individual and community concerns and bringing them to the notice of the project management. The LCF meetings can be organized as and when necessary at the local level in order to ensure the participation of affected households as well as resolving the local issues which are quite often contentious.

**Free, prior and informed consultations with the Indigenous Peoples (IPs):** The legal policy framework in Nepal has defined and recognized officially many indigenous ethnic groups and has recently ratified ILO 169 on Indigenous and Tribal People's Rights. This policy framework advocates for the respect and protection of their rights, interests and their unique social, cultural and economic way of life. Central to

all these is the sharing of relevant information, consultation with and participation of concerned indigenous groups in the development process. Following the spirit and principles of this policy framework, DOR has laid out its approach in its operations towards indigenous people in the ESMF. The ESMF Chapter 3.8.6 on Indigenous People states that prior consultations and information with indigenous people are essential to benefit them from the development programs or projects. Similarly, the Interim Guidelines for Enhancing Poverty Reduction Impacts of Road Project (IGEPRIR), DOR (Appendix 23) highlights about preparation of Indigenous People's Development Plan including consultations with indigenous people for devising mitigation measures to address the adverse impacts of indigenous groups due to development projects.

## **5.2 Existing Institutional Setup for Addressing Environmental and Social Issues**

The existing government institutional setup to address environmental and social impacts in the transport sector comprises institutions at both central and local levels. The environmental and social policies are usually framed and promulgated by the central level institutions such as National Planning Commission and the Ministry of Environment, while other Ministries and line departments at central level provide sectoral inputs for the national environmental and social policy setting. Approval for the EA documents of IEE level is given directly by the Ministry of Physical Planning and Works. For the EA documents of EIA level, this ministry forwards the document with its comments to Ministry of Environment. The Ministry of Environment is the final authority for the approval of EIA level assessment documents. The GESU of the DOR is the responsible entity within DOR for management of project environmental and social issues, from planning to implementation. The line institutions at district level and in the field are primarily assisting with planning and implementation of environmental and social measures at operational level.<sup>4</sup>

### **5.2.1 Central Level**

**The Ministry of Environment (MOE) and the Ministry of Physical Planning and Works and Transport Management (MoPPWTM)** are the key Ministries directly involved in the EA process of transport sector including bridge projects. The MOE is the apex authority in the matters related to environment and has authority to approve the EIA documents of the bridge projects. The MOE is also the authority for setting up pollution standards for emissions, effluents and other discharges and can penalize developer and prohibit the development works not complying the pollution standards and environmental approval conditions. The Planning, Monitoring and Evaluation Division under the MoPPWTM is also directly involved in the EA process of bridges. Its roles include review of EIA documents of Bridge Projects, and participate in EIA review meetings of MOE. MoPPWTM has authority to approve IEE Reports. EPA/EPR empowers MoPPWTM for monitoring and evaluation of the bridge project as per approval conditions and provides directives to the developer in case of non-compliance.

The Ministry of Forest and Soil Conservation (MOFSC) including the Department of Forest and Department National Parks & Wildlife Conservation and other line ministries (Ministry of Culture, Department of Archeology) have only indirect roles in the development of transport sector projects including bridges. Generally, the MOFSC and other line ministries come only in picture and involves directly when a project is likely to be located in the forest or in the protected area or in the cultural site. Approval of forest clearance is the authority of the ministry of Forest and Soil Conservation.

**The Bridge Project and the Geo-environmental and Social Unit (GESU)**. The Bridge Project within DOR has the primary role in planning, design, implementation and monitoring of the bridge projects on

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<sup>4</sup> The overall institutional setup for addressing the environmental and social issues of the bridge projects is presented in **Annex 5**.

Nepal's Strategic Roads Network. The Bridge Project, in particular, has the responsibility of preliminary planning, pre-feasibility study and alternative analysis, feasibility study and design. GESU is headed by a chief who reports to the Deputy Director General of DOR. Its members consist of regular DOR staff and consultant experts who are recruited from the market to provide support on fixed terms. GESU is entirely funded under DOR's budget.

The GESU has the following roles in the EA process of the projects under DOR including bridge projects.

- Screen bridge projects for IEE or EIA as per EPR provisions
- Commission IEE and EIA as per the EPR provisions (conduct or outsource experts or consulting firms to conduct IEE and EIA studies)
- Review Scoping Document/Terms of Reference of EIA/IEE study and IEE and EIA studies and forward to MoPPWTM with its consent and comments on the documents for approval processing
- Participate as concerned stakeholder in the review meetings of Scoping document, TOR, IEE and EIA documents organized by the MoPPWTM and MOE and give their consent and comments
- Co-ordinate with the sectoral and cross- sectoral ministries and departments for approval and permits such as MOFSC, Ministry of Energy, Department of Forests, Department of National Parks and Wildlife Conservation, Department of Irrigation, Department of Archeology etc. during project preparation and implementation
- Conduct or outsource to conduct environmental and social monitoring of the project under implementation, and
- Public disclosure of the EA process and documents
- Supervision and monitoring of project interventions under implementation as per ESMF /EMP and recommend for corrective actions

### **5.2.2 Regional Level**

*The Regional Directorate (RD)* of DOR does not have any role in the EA process and subsequent stages of bridge project construction. It has limited role in supervision and monitoring of the projects implemented in the region and is a coordination link between the DOR and the division offices under its jurisdictions but not necessarily for project planning, execution and monitoring.

### **5.2.3 DOR Division Offices**

*The DOR Division offices* have no major roles in the EA process during project preparation stage. However, their accountability is quite high because of the direct involvement during the implementation stage of bridge projects. As a primary implementing organ of the Bridge Project, the division offices have roles in construction supervision. By implication, the Division Offices are also accountable for environmental and social impact supervision and mitigation on day to day basis. As it is involved in the implementation of the bridge projects, incorporation of the environmental costs of civil works in the bid document, based on the approved IEE/EIA documents as well as SEMP/EMP, is the responsibility of Division Office. It may ask for GESU involvement in this process. Apart from this, the Division Office is responsible for co-ordination with the district forest office and other sectoral line offices at district as well as with the local communities for approval, permission, and execution of the project as required by the project planning and design.

On social aspects, implementation of any social plans that includes land and property acquisition, compensation payment and delivery of various assistance measures, has to be performed by concerned division offices in close co-ordination with the District Administration Office, District Survey Office, Land Revenue Office including GESU at the centre. It also has to function as front line grievance handling agency in case of conflict and dissatisfaction of the affected parties.

#### **5.2.4 District Line Agencies**

The district line agencies including the District Administration Office (DAO), District Land Survey Office (DLSO), District Land Revenue Office (DLRO) are crucial agencies for the valuation and determination of the compensation rate for each and every affected owners. Chaired by the Chief of District Administration Office (CDO), the CDC may consist of members from DLSO, DLRO and DDC is the legal authority to handle all issues related to land compensation as per the Land Acquisition Act, 1977. The Project Chief is also the member of the Committee and the representatives of affected people may attend the meetings as invitee members.

#### **5.2.5 Consulting Entities**

Due to limited capacity, planning, design and sometimes monitoring of environmental and social mitigation measures are often contracted out to specialist consulting firms to complete. Therefore, the role of consulting groups is critical in the design, supervision and monitoring quality of bridge projects.

### 5.3 Existing Institutional Mandates, Responsibilities and Performance

A highlight of the various institution's mandates and responsibilities is briefly summarized below. Annex 6 presents the overall assessment of the existing institutional mandates, responsibilities and performances of the various level institutions involved in the EA process including bridge sector.

#### 5.3.1 National Planning Commission (NPC)

NPC is the highest policy making body which is involved in formulating overarching national development policies and plans of short, medium and long term including transport and bridge sub-sector. As per the mandate, its role in the formulation of the national policies on environment and social issues is paramount apart from setting priorities of the developments projects including bridges. On the initiation of donor communities, since last decade it is involved in drafting the Resettlement and Entitlement Policy for involuntary displacement of people by the development projects.

#### 5.3.2 Ministries

The Environmental Division of Ministry of Environment is mandated fully with significant responsibilities, especially on EA process. It has paramount roles in the formulation of national environmental policies/guidelines, co-ordination with sectoral ministries /departments for the formulation of sectoral environmental policies/guidelines, co-ordination with the bilateral and multilateral donors etc. Other mandates and responsibilities related to environmental matters are formulation of pollution related standards; review of EIA documents, public disclosure of EIA documents, approval of EIA reports with or without conditions; conduct environmental audit of the completed projects and conduct research and trainings on EA process, procedures and review outcomes

Although most of the functions of the Environmental Division of Ministry of Environment are within the purview of the stipulated mandates and responsibilities, for various reasons, it has not been able to function efficiently as desired in the streamlining of the EA process particularly on: i) formulation of guidelines on natural and social environmental study (generic and sectoral); ii) setting of pollution standards; iii) establishment of a reliable process for EIA review; iv) effective and timebound environmental monitoring and auditing; v) participation/co-ordination in the environmental research or promotion and v) conduction of regular trainings on EA process and other environmental related matters.

Two Divisions of the Ministry of Physical Planning, Works and Transport Management the Works Division and Planning, Monitoring and Evaluation Division are responsible to discharge different tasks related to the bridge development. The Works Division requires the formulation of proper policies, strategies and action plans; conduct pre-feasibility studies of various projects, and, based on the feasible projects, develops a long-term plan; performs the role of coordinating the governmental, non-governmental and private organizations; renders advice to the Ministry on all the technical, financial, social and environmental aspects, and acts as the secretariat for any kind of coordination. However, the Work Division of the Ministry is not directly involved in EA process.

The Planning, Monitoring and Evaluation Division is directly involved in the EA process and is responsible to formulate sectoral environmental policies, review and approve IEE level EA reports, review and forward EIA level EA reports with comments and suggestions to the Ministry of Environment, formulate programs for capacity building of staff related to natural and social safeguard impacts for the transport sector including bridge, and render assistance to other Divisions of the Ministry.

Despite its regular function of review and approval of the IEE level documents and review and forwarding for approval of the EIA level documents of the sector as per the mandate, it's performance is considered to need improvement in i) formulation and updating of sector policies in coordination with other sectoral agencies and ii) coordination with other divisions and units of the Ministry and DOR; iii)

conducting or commissioning environmental monitoring of the approved projects; iv) strengthening of EA review process.

**Ministry of Forest and Soil Conservation** has the mandate and responsibility to initiate the approval process for the forest area clearance activities once the EAs are approved by the concerned agency and Ministry. It also represents as a stakeholder in the review meetings of EAs at the Ministry of Physical Planning and Works and the Ministry of Environment to give the Ministry's opinion and express concern, if any, on the project, particularly with regard to the alternative analysis.

### **5.3.3 Department**

**The DOR Bridge Project Unit and GESU** have critical roles to play in the EA process of the transport sector including bridge. The Bridge Project mandates and responsibility includes screening of the bridges; conducting feasibility studies and designs of the bridge projects; outsourcing the consultants for necessary pre-feasibility, feasibility and detailed design studies; implementing the centrally managed bridge projects; forwarding the designs to the concerned Regional and Divisions for the Tender bidding, contract award for construction of bridges; and undertaking periodic monitoring and supervision of construction works etc. Implementation of environmental and social measures at operation level is the responsibility of individual project teams and contractors.

The Bridge Unit seems to have a better performance in the technical studies of the projects, but lag in the timely coordination with the GESU to meet its study/information requirements for the environmental screening for the EA process. The DOR Environmental Management Guidelines recommends environmental screening during pre-feasibility studies. But the screening, if undertaken, is usually done late. Timely screening would have greatly added value to the decision making process through evaluation of the various alternative options based on initial environmental screening. The Bridge Project Unit relies on Division Offices for supervision of environmental and social measures during construction. This, in itself, is a limiting factor in assuring a quality environmental and social performance during construction as Division Office lack social and environmental expertise.

The GESU is mandated with several tasks and responsibilities related to EA process of the DOR projects including bridge projects. Its major responsibilities include formulation sector specific environmental and social policies; provide inputs for cross sector policies; conduct required trainings and skill enhancement programs on environmental and social safeguard aspects to its staff; undertake initial environmental and social screening of projects (including bridge); preparation of sector specific environmental and social frameworks, guidelines and manuals; commissioning IEE/EIA (conducted internally or outsourced to environmental consultants), review and quality control the IEE/EIA as per government sectoral and cross-sectoral guidelines; documentation of all information and disclosure of documents for public, and periodic supervision and monitoring of environmental and social components of the projects.

Despite the environmental and social mandates and responsibilities, GESU's performance, as to date, is less than satisfactory. GESU, when requested by the project or units, has been doing initial environmental screening of DOR projects, including bridges, as per EPR provisions, carrying out IEE or EIA (outsourcing of environmental consultants for EA studies), and reviewing EA documents. In the current institutional and organization setup, GESU has only an observer status in policy-making and implementation process in DOR. Its authority to maintain effective and sustained coordination is, therefore, limited. GESU has yet to give clear guidelines to the respective units of the department regarding the type of information required for initial environmental/social screening and alternative assessments at different stages of project planning including the pre-feasibility stage. Proper documentation in retrievable archives for the projects which have under gone initial environmental screening and EA process is the other area limiting the self assessment of the activities taken by GESU. Limitation of human and financial resources seems to be a major bottleneck in carrying out the monitoring activities of the projects under implementation and conducting EA training to the concerned



unit staff of the DOR and its regional and division level personnel involved in the project design studies and day to day supervision monitoring.

#### **5.3.4 Regional/District Level**

***The Regional Directorate, and the Division Office of the DOR***, has no specific mandates with regard to the EA process in the project preparation stage. As these are the frontline executing agencies for the implementation of the bridge projects in the region and division level are responsible for the project implementation starting from preparation of contract bid documents, public notification for bid tender, screening of contractors and consultants, awarding contracts and overall construction supervision and monitoring including environmental and social management as stipulated in the approved IEE /EIA level documents.

These offices are well organized in delivering the engineering design aspects while preparing the tender bid documents and construction supervision as per engineering designs. However, due to lack of adequate training and lack of environmental and social experts, the regional and division offices are not effective to plan, implement and monitor the environmental and social responsibilities. Most of the tender bid documents reviewed have no specific binding provisions on environment and social management nor the costs included in the ESMF is reflected in the bid documents. This reflects lack of coordination between GESU and the Division offices in the environmental and social management matters including sharing of the EAs with the Division Office. In absence of required Environmental and Social Experts in Division Offices, implementation and monitoring of the environmental and social activities is poor at the local level.

***Other District Line Offices***, have no direct mandates and responsibilities in the EA process during the project preparation phase. However during project implementation, a host of environmental and social management issues including their planning and management continues to persist in absence of effective coordination and assistance of the other District Offices with the concerned Division Office of the DOR. District forest office is the other agency whose help in delineating the forest areas for clearance based on the approval letter from the Ministry is of outmost significance. The District forest office is also responsible for showing/recommending the afforestation area for the plantation of cut trees as per the forest guideline 2006 and monitoring of the afforestation activities.

The District Administration, District Land Revenue, District Survey and Maintenance Office have a major role in matters related to land and property acquisition for development project including bridge projects as per the Land Acquisition Act, 1977. A Compensation Determination Committee (CDC) formed under the Chairmanship of Chief District Officer (CDO) as per the Act provisions have members of the other district offices. The CDC has the powers to acquire private lands for public goods and is the authority to take decision on the compensation rates for different types of assets.

## **Section VI. Resources Available**

### **6.1 Financial Resources:**

One major challenge in the management of environmental and social issues is the adequacy and timely availability of financial resources. The current available resources covers only the administrative costs including salary of the concerned environmental division, units etc. There is very little budgetary provisioning to conduct coordination meetings, stakeholder consultation, review of the EAs, and supervision/monitoring and auditing works of the ongoing and completed projects. As to date, particularly the project developer has to contribute to the EA reviews, monitoring and auditing works of the government line agencies which is a major bottleneck in planning the supervision and monitoring works in scheduled time for various reasons. The available financial resource for social and environmental management at the various institution levels is considered a key constraint adversely affecting the social and environmental performance of the line agencies. With additional financial resource allocation, the performance of the agencies to comply with the given mandates and responsibilities is expected to increase from the present level. Annex 7 provides an overview of the available financial resources at various institutional levels for the streamlining of the EA process including bridge projects.

### **6.2 Human Resources**

Apart from the financial resources, human resource availability to carry out the given mandates and responsibilities at all institutional level is another tremendous challenge (see *Annex 7*). Officials of almost all agencies consulted informed about the inadequacy of technical manpower within the institutions to effectively carryout the environmental and social planning process, not to mention their streamlining. DOR Bridge Project, RD and Division Offices, none has the required technical manpower in the environmental and social sector to deliver the required outputs. Given the sectoral and cross-sectoral EA work volume, human resources available with GESU and MoPPWTM is also inadequate. The GESU, with responsibility for SRN road and bridge projects all over Nepal, has only two permanent technical staff and two outsourced technical staff, while the workload includes as many as 249 district roads and 297 regional roads. The overall assessment indicates that the available staffs have the knowledge and understanding of the underpinning issues of environment and social aspects of the bridge projects. However, they are much lacking in staff numbers and are not able to deliver the given mandates and responsibilities in managing environmental and social issues related to bridge operations. As a result, their involvement is confined to the processing of the EA documents of a large numbers of projects which are already due for approval processing as per the law provisions (EPR, Chapter 3, Rule 11(1)).

## **Section VII. Operational Performance in Managing Environmental and Social Impacts**

### **7.1. Management of environmental impacts in bridge program**

From perspective of policy and legal provisions and operational guidance, Nepal's environmental system is consistent with OP/BP9.00 core principle and elements (see Chapter 3). However, the application effectiveness of the environmental provisions in the SRN road, particularly in bridges, and hence the operational performance in the ground is mixed. Performance is better in donor funded activities than the activities undertaken by government own resources. This is summarized below.

***Environmental Screening, IEE and EIA.*** All SRN roads are subject to desk environmental screening, which checks EPR provisions to decide if a proposed project requires an EIA or IEE or no environmental assessment is needed. Project screening, using government resources, commonly does not review potential environmental risks. Although operational guidelines require screening at an early stage (such as during project identification/ prioritization and during pre-feasibility), in practice, most of the environmental screening is done at later stages. In the case of the donor supported project, as there is demand, screening is done at an early stage to identify potential risks. Environmental screening is only partially practiced in the case of bridges, and standalone IEE for a bridge is rarely done. The Department of Roads and the Bridge Project interpret that the road sections where the bridges are made have undergone EIA or IEE and therefore bridge do not require separate EA. The EPR, however, has separate criteria for environmental screening of the bridges and bridges are constructed as separate project at later date than the road. Also, the road EIA and IEE do not provide any details of the bridge locations, alternatives, span, and length and the road sector ESMF do not have specific environmental mitigation measures for bridges. Bridges, in two situations, are subjected to environmental screening and required IEE or EIA: (i) when a bridge is located in the National Park or protected area, and (ii) when a more than 100 m long bridge on SRN is build by a contractor. The screening, IEE or EIA gives attention to the important biodiversity (such as National Parks) and areas with physical cultural resources.

There are instances of late commissioning and/or completion of an IEE and EIA in relation to project planning and design. The scope of IEE study is defined by the Ministry. Stakeholder consultation and site visit are carried out for scoping of an EIA. GESU is not necessarily consulted for the environmental screening and commissioning of environmental assessment or for monitoring, although GESU is the expert agency in DOR for environmental and social matters.

***Alternatives Analysis and avoidance of natural habitat and cultural sites.*** Only projects subject to an IEE or an EIA would have discussion on alternatives. The scope of alternative analysis is, however, limited commonly to design alternative and 'no project' alternative. The site alternatives are rarely covered. The strategic alternative is not covered. Even without alternative analysis, prior approval from the DoNPWC is required if there will be project activity in the protected area, or from DoF if there will be activity in the forest: this generally promotes avoidance of known protected area and important forests during planning. In almost all bridge projects, site/ premise of physical cultural significance is avoided due to social and cultural sensitivity.

***Assessment of impacts and identification of mitigation measures.*** The IEE or EIA of roads, in general, identify generic potential impacts from the project activities. These are, in fact, already mentioned in the ESMF and other guidelines. Identification of impacts is focused mainly on the direct impacts; indirect impacts are rarely or weakly covered. Induced, cumulative and trans-boundary impacts are not covered. The mitigations measures recommended by the IEE or EIA are commonly generic, lacking site specification plans/details for implementation. Also the EAs are weak in identifying measures to avoid or minimize the impacts. In the donor funded roads such as those constructed by the World Bank financed Rural Sector Development Program (RSDP), the EA is prepared during feasibility stage and Site-specific Environmental Management Plans are prepared. Although road IEE or EIA do not cover bridge specific

issues and mitigations, many of the mitigation measures identified by roads' EAs are applicable to bridge construction also. The bridge IEE, where undertaken, is in general of the same quality and nature as that of the road IEE discussed above. Risk of landslides and floods is one of the planning and design factors generally considered by the engineers, and are also included in the EMP of a road and bridge.

***Implementation of mitigation measures.*** Implementation of the mitigation measures is the responsibility of the project proponent, the Bridge Project in the case of BIMPS bridges, and the contractor. The environmental mitigation cost is calculated on lump sum basis – specific mitigation costs for various activities/ items are rarely included in the contract bid document. The late EAs with respect to project detailed planning and design, lack of specific mitigation detail/plan, and lack of specific cost item in the bid document are some causes for the weaknesses during implementation. Field observation of some of the selected ongoing bridge projects, carried out as part of this assessment, reveals poor environmental management and mitigation during construction of bridges. Examples of poor management practices include improper mining of river bed sand, haphazard disposal of construction and camp wastes, no use of protective gear, and the occupation of community forests. Experiences in the roads and observations in the bridge construction show that workers health and safety is not a priority to the contractors, and not commonly practised by the workers where contractor provide safety items. Clear contractual provisions and construction oversight by qualified environmental person are other reasons of poor environmental management in road and bridge construction in Nepal.

***Environmental Monitoring.*** Environmental monitoring is the responsibility of the concerned ministry – but the MoPPW, the concerned ministry for roads and bridges, rarely conducts monitoring. Of late, DOR/GESU has initiated monitoring in a limited number of road projects, particularly in donor funded roads such as RSDP. This has been possible due to encouragement and support from the donor funded project. Under the RSDP, GESU has hired an independent consultant for environmental reviews of the practices in their roads. In some donor funded projects, local body and community are also involved in environmental monitoring. However, until now, environmental monitoring of bridge construction is rare. Although the EIA or IEE provides cost estimates for monitoring by different entity, these are not necessarily allocated by the project except in the donor funded project. Field observation at bridge sites, carried out as part of this assessment, reveals limited environmental monitoring by either the Bridge Project or by GESU or MoPPWTM.

***Information Disclosure and Stakeholder Consultation.*** The roads and bridges using government resources require formal information disclosure and stakeholder consultation, if an IEE or EIA is necessary. This may be done as a formal requirement, such as getting no-objection/ support letter from the Village Development Committee, rather than identifying and addressing any genuine concern. Donor funded projects, such as RSDP, follow more elaborate system for information disclosure and consultation even if an IEE or EIA is not formally needed. The disclosure and consultation requirements in donor funded projects are laid out in the respective ESMF.

## **7.2 Management of social impacts in bridge program**

Corresponding to its country system in managing social impacts in transport investments, Nepal runs a dual-track performance standard in implementing its policies in addressing social impacts in bridge programs. The country bridge program follows the requirements and procedures of the country legal policy framework, the key law of which is the Land Acquisition Act. These are legal binding and enforced. However, the Environmental and Social Management Framework for DOR is only enforced in operations that involve international financing and are subject to supervision by international financiers.

Consequently, where requirements of national laws and the ESMF overlap, these requirements are followed up in project planning and implementation. In the areas of gaps between the national laws and DOR ESMF, such as assistance for those without titles and compensation at replacement cost without

depreciation, the extra requirements in the ESMF that top up gaps in national laws and policies are only implemented in internationally financed operations. Key issues in regard and their performance are described and summarized below:

- **Free, prior and informed consultation of indigenous communities.** This principle is reflected in many scattered provisions of various government policies. Nepal has also recently ratified ILO 169 on Indigenous and Tribal People's Rights. Specific requirements and procedures are clearly prescribed in the DOR ESMF. However, its implementation is limited more to internationally financed operations. For example, vulnerable community development plans as required in the ESMF are not prepared for domestically financed operations where consultations with indigenous communities are limited to interventions related to land acquisition under the Land Acquisition Act and required under environmental policies.
- **Assessment of impacts of land taking, including on those without titles.** This is mandated under the Land Acquisition Act and is generally enforced. However, the LAA does not recognize those without titles for compensation or assistance. The ESMF recognized and addressed this policy gap, but its implementation has not been expanded to the entire bridge program and is limited so far to internationally financed operations.
- **Compensation and assistance to restore livelihoods, including those without titles.** Restoration of livelihoods for those affected is not mandated as an objective in the Land Acquisition Act, but the spirit is reflected in several relevant policies and is clearly stated in the DOR ESMF. The performance, though, differs in internationally and domestically financed operations. In domestically financed operations, the mitigation measure is limited to cash compensation per the Land Acquisition Act, without any additional assistance if required for livelihood restoration. In internationally financed operations, this is followed up diligently through project planning and implementation process.
- **Compensation at replacement cost.** The LAA requires compensation for land at market price and sets a procedure for its evaluation. The evaluation is carried out by a district fixation committee charged with this responsibility under LAA, based on the average transactions in the past one year, with reference to market practices. General practices indicate that this is getting close to real market price, but there is a big variation depending on the performance of the committees. The national legal policies mandate market prices for structure compensation, which factors in depreciation. This policy difference is fixed in the DOR ESMF, which requires compensation at placement cost. However, this is only implemented in internationally financed investments.
- **Practice of land donation.** There is a tradition of land donation practice for community infrastructure in Nepal. This is culturally accepted and practiced widely in Nepal for public utilities development within rural communities, such as schools, roads, wells and community halls. This practice has also been extended to rural road development in past few decades. Road access is a great challenge in Nepal. There is tremendous need and demand from remote and isolated communities for its development. Most of the current roads were built responding to this demand where communities contributed their lands for this access benefits. Most of the rural roads are built on donated land. The practice is largely based on verbal agreement without evidence in writing or transfer of titles. In internationally financed projects, the donation practice is accepted in community-owned infrastructure programs or simple rural access roads. In this case, there are clear requirements to regulate this practice in terms of documentation, eligibility criteria and evidence of the voluntary nature etc. These are reflected in the ESMF, but its implementation is only limited to internationally financed operations.
- **Planning documentation.** Under the national legal policy requirements, social issues, such as land and indigenous people's issues, are generally an integral part of the environmental screening, assessment and documentation process. Therefore, no separate resettlement action plans or

vulnerable community development plans are prepared. The DOR ESMF is requiring a separate planning and documentation process, leading to the development of project RAPs and VCDPs. This is being applied only to internationally financed operations.

- **Grievance redress.** For investment operations, there is an informal grievance redress system in place at project level in Nepal. The formal system is the legal system with courts which is open to all citizens regardless of what grievances or sectors. At operational level, grievances are reported and resolved with local administrations and DOR project offices in the field. There is no formal recording requirement or a fixed timeframe for resolution. Considering the limited impacts and small scale of investments, this informal system seems to be sufficient. The DOR ESMF has to improve this informal system and build in some mechanisms to make it formal. However, this is not yet applied to all DOR operations.

## **Section VIII. Stakeholder Consultations**

The assessment team has carried out various consultations with the DOR within the Ministry of Physical Planning Works and Transport Management and the Ministry of Environment in Kathmandu and local governments and communities in various districts throughout the country. The team made field visits to a few projects in Dhading, Kaski, and Chitawan districts, and met with DOR regional offices, local governments, contractors and local communities. During the meetings, the team discussed with the attendants relevant government policies, institutional responsibilities and their implementation performance. This feedback provided the basis for the development of the assessment report.

A national level consultation workshop was held on April 23, 2012 in Kathmandu, with relevant ministry and DOR officials over the assessment's findings and recommendations under the PforR program. A regional workshop was held on April 25, 2012 in the Pokhara district to share the assessment's findings and recommendations with local stakeholders, including local VDCs and community members, NGOs, district level government offices including District Administration and District Forest Offices, for their views and recommendations to improve the assessment report. The Kathmandu consultation had 15 participants and the Pokhara consultation had 40 participants.

The consultations held provided more detailed information on the PforR process, the proposed BIMPS program and the key findings and recommendations of the ESSA. Overall the participants showed support for the SRN Bridge Program and the proposed PforR operation and asked a variety of questions and commented on many specific aspects of the Program. Some of the general themes which raised in the questions of participants include: how the DLIs will be developed and decided between the World Bank and GON, how consultation and land acquisition will be handled under PforR; how the environmental and social standards under PforR relate to the Bank's safeguards; how will program screening and alternative analysis be conducted; and what will the role of GESU be under the Program.

During program implementation, the Program's progress will be shared and reviewed with key GoN and community level stakeholders for further refinement.

The assessment report will be disclosed through the World Bank InfoShop in Washington DC, USA. The ESSA has been disclosed through the World Bank Public Information Centre in Kathmandu, Nepal and, with agreement from the government, has also been uploaded onto the DOR website.

## **Section IX. Recommendations**

The above assessment indicates that Nepal's national systems that apply to the management of environmental and social impacts for the transport sector, specifically the SRN Bridge Program, is quite unbalanced in its implementation. This lack of balance is reflected in (a) a relatively advanced policy framework and a weak capacity to implement; and (b) a dual-track performance in its implementation between domestically and internationally financed operations. These have led to generally weak poor performance in its implementation of its environmental and social policies. The following measures are proposed based on the assessment findings of Nepal's national systems to improve management of environmental and social impacts and to strengthen weak implementation capacity. The recommendations are in three major areas, i.e. policy, institution and capacity building. Under each recommendation, specific actions are proposed.

### **Recommendation One - Update the DOR ESMF to include DOR Bridge Program.**

The existing DOR ESMF was developed and issued in 2007. It was mainly developed for DOR road program, including new constructions and rehabilitation. This ESMF was developed on the basis of relevant government policies, taking into consideration of international good practices, including relevant ADB and World Bank policies. This ESMF went through an internal review within the Ministry of Physical Planning and Works (MoPPW), with review input provided by all concerned departments, including the Department of Law and the legal officers within DOR. This ESMF was approved and signed by the Minister, and officially issued for implementation within DOR for its road program.

Brief review of the ESMF has revealed some gaps and areas of improvement to be consistent with the principles and elements of OP/BP 9.0. Much progress and operational experiences have also taken place since it was issued in 2007. It is recommended and agreed with DOR that the ESMF needs to be updated for its bridge program as well. The following actions are recommended for its updating and reissuance,

- The current DOR ESMF will be updated and strengthened in line with OP/BP 9.00 and incorporating lessons and implementing experiences since it was issued. A detailed technical review will be conducted of the ESMF by relevant experts to provide recommendations for revision of the ESMF.
- The ESMF will be expanded in its current application scope to include DOR bridge program.
- The MoPPWTM will organize a technical committee composing of experts from relevant departments within the MoPPWTM and representatives of relevant ministries to review the experts' recommendations to update the ESMF. A final revised ESMF will be submitted for the review and approval by the minister of MoPPWTM.
- MoPPWTM will issue the revised ESMF for DOR operations with a decision circular.
- Considering the amount of time required to update and formally issue the ESMF, this is expected that this will be completed by end October 2012.

### **Recommendation Two - Strengthen environment and social impact management within DOR.**

Much discussion was devoted to the institutional aspects within DOR in the management of environmental and social issues when developing the ESMF in 2005-2006. The ESMF institutional chapters have documented the discussion recommendations, focusing particularly on strengthening GESU. However, over the years, not much progress has been achieved in this aspect. Though GESU seems to be given the responsibility for managing environmental and social issues within DOR, its role remains insignificant in actual DOR operational decisions and implementation. Furthermore, GESU is greatly constrained in performing its responsibilities due to the inadequate allocation of financial and



human resources. These indicate a much stronger need and more attention within DOR to the management of environmental and social impacts in its investment program. This requires a change in the institution setup within DOR. It is strongly recommended that DOR take the following actions

- GESU be promoted to report directly to the Director General of DOR as the Environment and Social Management Unit of DOR.
- GESU be given the mandate to be responsible for the management and performance of the environmental and social aspects of DOR road and bridge program, including its planning, implementation, monitoring and evaluation.
- The above be decided and formally announced through a decision circular within DOR. This decision circular is expected to be issued by end October 2012.

### **Recommendation Three - Strengthen the GESU and improve its operation**

In order to perform its responsibilities, GESU will need to be significantly strengthened in terms of staffing, financial resources, its internal operating arrangements and coordination with other technical units and ministries. In this regard, it is critical that DOR develop an implementation plan to strengthen GESU. It is suggested that this implementation plan include the following

*Scope of work.* GESU needs to define its scope of responsibilities and work load under its given mandate. This should be based on the DOR operation plan for the SRN Bridge Program. It should cover planning, implementation and evaluation phases of the entire bridge program and define the roles and tasks of the GESU in these different phases.

*Operation plan.* GESU needs to lay out its strategy and approach in fulfilling its mandate in this operation plan.

- Defining the roles and responsibilities of various stakeholders, including GESU itself
- Formulating an operational modality and procedures
- Developing technical tools and instruments
- Coordination with other units and divisions

*Management system and human resources mobilization.* It is important to realize that the management of social environmental impacts in the SRN Bridge Program involves many partner organizations apart from GESU, including contractors, other relevant ministries and local administrations, and that GESU's role is more of a management function at the ministry level. Therefore, it is highly recommended

- Based on its scope of work and the bridge program, GESU should carry out an assessment of the staffing needs, including area of expertise, qualification and number of staff at various levels.
- An assessment is necessary of the various stakeholders involved and their roles and functions in the environmental and social management of the bridge program.
- Based on the above, GESU should develop a strategy for human resources mobilization and team building, exploring all areas of potentials and all entry points of recruitment and capacity building at various levels, including with contractors, project level offices, line agencies at different levels.
- Against this strategy, GESU should formulate a staffing plan for itself, including number of staff, specialization and qualification and staff assignment as well as a schedule for their recruitments.

*Operating cost and budget allocation.* DOR should develop an annual financial allocation forecast and estimate in relatively good details the allocation needs for the next three years. These estimates and allocations need to be reviewed carefully within DOR.

*Monitoring and evaluation.* GESU will spell out in detail its monitoring and evaluation arrangements on the performance of the environment and social inventions under its bridge program.

**Annex 1: List of Different Officials/ Stakeholders Met during the Preparation of the Study**

S.No.	Names	Designation	Office
1	Krityananda Thakur	Chief	Bridge Project, DOR
2	Naresh Man Shakya	SDE?	Bridge Project, DOR
3	Ganesh Kumar Basnet	DE	Bride Project, DOR
4	Purna Siddhi Shrestha	Chief	GESU, DOR
5	Ashok Bhattarai	Scientific Expert	MOE
6	Bidhya Nath Bhattarai	Env. Expert	MoPPW
7	Dinesh Shrestha	Overseer	Benighat Bridge Project
8	Bishwa Bijaya Lal Shrestha	Chief	Pokhara Road Division
9	Ramesh Poudyal	Sr. Supervisor	Pokhara Road Division
10	Birendra Mandal	Engineer	Bharatpur Road Division
11	Basanta Yadav	Engineer	Bharatpur Road Division
12	Prayash Shrestha	Affected Person	Benighat Bridge
13	Ishwor Kumar Shrestha	Do	Do
14	Gambhir Man Shrestha	Do	Do
15	Harka Bd. Shrestha	Do	Do
16	Nara Bd. Pun	Local	Hyanja-Lamachaur Bridge
17	Sun Bd. Tamang	Local	Do
18	Phul Bd. Tamang	Local	Do
19	Lil Prashad Shrestha	Local	Budhi Rapti Bridge
20	Kul Prashad Chaudhary	Local	Do
21	Rati Mahato	Local	Do

## Annex-2: Field Observations: Social Environment<sup>5</sup>

S.No.	Bridges	Districts/ Location	Social Issues	Advanced Planning of Social Issues	Measures Taken to Address the Issues	Remarks
1	Trishuli River Bridge Project (Benighat- Arughat Gorkha Road)	Dhading/ Hill	i) Approach road to affect about 1.3 ha of private land (Bari) of 12 hhs. ii) One residential / shop structure already dismantled voluntarily by owner. iii) Among 12 hhs., one is Brahmin, one is Gurung (IP) and 10 are Newars (categorized under advanced IP group) iv) One primary school shifted from its original place where approach road is designed.	Yes; being the Design, Build and Transfer (DBT) Project, the contractor held discussions with the affected people to reach an agreement with affected land/ structure owners during IEE preparation.	Private land / structure obtained on donation prior to construction by the Designer/ Contractor.	i) Individual agreement letter signed by donors and included in the IEE document.  ii) No grievances heard from assets losers during field visit/ discussions.  iii) Locals expect significant rise of land value after completion of bridge due to commercial prospects of the area.
2	Setipul (Lamachaur- Hyanga Bridge)	Kaski/ Hill	i) Private land/ small structures in Hyanja VDC likely to be affected by approach road. The bridge site is close to the extended slum areas along the Seti River bank with about 75 structures and about 5 private structures. ii) No consultations are made with likely affected land/ structures owners and no information is documented about the likely impacts.	No consideration of social issues during planning/ design phase.	No measures taken to address the issues by any of the agencies concerned i.e DOR Regional/ Division Office or Contractor.	i) No considerations made about land/ structures likely to be affected by approach road on the right side of the bridge. ii) VDC level understanding/ agreement made for mitigating the issues.
3	Khageri River Bridge, Uttarakhanda	Chitwan/ Terai	i) No social issues noted on this bridge site as it belongs to community forests on either side of the river.	No social issues are likely to occur.	Three Community Forest User Groups (CFUGs)	i) No grievances heard about the bridge from people. ii) No documented

<sup>5</sup> A number of social issues observed in the field (summarized in the table below). Government agreed to address these and similar issues, during BIMP implementation, by allocating resources, making responsibility clearer, ensuring timely monitoring, strengthening GESU, and updating ESMF to include bridge.

S.No.	Bridges	Districts/ Location	Social Issues	Advanced Planning of Social Issues	Measures Taken to Address the Issues	Remarks
					were reported to have extended supports for bridge construction.	information available about CFUGs' views/ opinions.
4	Budhi Rapti River Bridge	Chitwan/ Terai	<p>i) No consultations are made with local people during design and construction.</p> <p>ii) Some private cultivated lands of 3-4 hhs. likely to be affected but no information recorded about such land and the owners who are mostly local Tharus (Indigenous People).</p>	No consideration of social issues during planning.	No advance planning/ consultations made and no measures considered to mitigate the potential social issues/ disputes on private land.	Some disputes likely to occur due to land take in future after completion of bridge.

## Annex 2 (cont.) Field Observations: Natural Environment<sup>6</sup>

S.No.	Bridges	Districts/ Location	Bridge Technical Features	EA process undertaking	Observed Environmental Issues	Monitoring Works	Remarks
1	Trishuli River Bridge Project (Benighat- Arughat Gorkha Road)  <i>(Photo 1)</i>  Start of construction works – August 2010 (Bhadra 2067).  Work completion – nearly 40%	Dhading/ Hill,	length – 153m, Span – 3 (above 25 m), Approach road – 384m (LB) abd 382m (RB) Design and built contract	IEE (approved)	<b>The site was under active construction</b> The observed environmental issues are: i. Occupational health and safety – protective gears are not used by the construction workforce, work without helmets, boots, gloves with bare foot and hands (Photo 2) ii. Camp conditions – poor sheds, no proper beds and ventilations, toilet dirty and inadequate, kitchens are dirty for healthy living of nearly 45 labor force (Photo 3). iii. Oil Leakage – leakage of hydrocarbons seen every where (Photo 4) iv. River bed morphology – highly disturbed due to mining of the bed material (Photo 5 and 6) v. Aquatic ecology – disturbed due to mining of the material by locals from the river flood plains and wet channels, spawning grounds damaged for a stretch of about 300m vi. Construction waste and solid waste – haphazardly disposed vii. Local fuel wood is used in kitchen against the provision of alternative fuel to be supplied by contractors viii. Local employment is none, because the contractor's rate is lower than what is normally given in the local market as revealed by the locals	Contractor engineer claim to have undertaken front line monitoring on day to day basis. But no documentation is available at site. As stipulated in the IEE report, the monitoring personnel are not seen at the site nor have visited the site  As revealed by the locals supervision from the bridge unit is rare and do not give consideration on environmental matters.  As revealed by locals they have no knowledge of GESU monitoring works at the site.	Approved IEE is generic and not specific, The mitigation measures proposed in the IEE reports are also not implemented as required by EMP. The contract document of the project does not include the environmental provisions in the Particulars of Contract, Contract specifications and Bill of Quantities.
2	Setipul	Kaski/	Length -55 m	Has not	<b>There is no active construction at site.</b>	The Road Division	As per the Bridge

<sup>6</sup> A number of environmental issues observed in the field (summarized in the table below). Government agreed to address these and similar issues, during BIMP implementation, by allocating resources, making responsibility clearer, ensuring timely monitoring, strengthening GESU, and updating ESMF to include bridge. No bridge located in sensitive area or requiring EIA will be supported under the BIMP.

S.No.	Bridges	Districts/ Location	Bridge Technical Features	EA process undertaking	Observed Environmental Issues	Monitoring Works	Remarks
	(Lamachaur-Hyanga Bridge)  (photo 7)  Start of construction – 2009 (2066).  Work completion – nearly 70%	Hill	Span -1 (above 25m) Approach road – nearly 350m (RB) not yet fixed. Designed by bridge unit and construction supervision by Road Division Kaski	undergone EA process. As per EPA screening criteria the bridge should have undergone IEE before implementation)	Issues at the time of construction could not be observed directly. The discussions with the locals residing close by revealed the following issues:  i. Occupational health and safety – Personnel protective gears were not given to the construction workforce, excepts boots to the concreting workers at the time of concrete works  ii. Labor camps – small sheds with poor facilities for sleeping, cooking, toilets to accommodate nearly 40 labor force  iii. The right abutment of the bridge is the site of construction waste dumping. Dumping of the community household waste is still ongoing at this site (Photo 8)  iv. The river bed material is being excavated by the local contractors downstream of the bridge location. The local contractor is given the license for mining by the District Development Committee and Road Division has no authority to prohibit the activity (Photo 9).	Kaski is responsible for the supervision monitoring of the works. Attention on the environmental issues, however, were seldom emphasized during supervision/monitoring of the road division  GESU has never visited the site for supervision/monitoring	Design Manual 2067 this bridge is a major bridge and requires IEE level study before implementation to comply with the EPR screening criteria.
3	Khageri River Bridge, Uttarakhanda (Photo 10)  Start of Construction works - 2008  Work completion – nearly 70%	Chitwan/ Terai	Bridge length - 78.5m Approximately 75 m approach road on the RB and LB. Designed by bridge unit and construction supervision by Road Division Bharatpur	Has not undergone EA process. As per EPA screening criteria the bridge should have undergone IEE before implementation)	<b>The site was under active construction</b> The observed environmental issues are: i. Degraded community forest area on either bank along the approach road (Photo 11). The community forest groups (3 nos) have given consent for the bridge construction without any compensation. It seems permission from the Ministry of Forests and Soil Conservation has not been taken as required by the law to comply the mitigation provisions of the Forest Guideline 2006.	The Road Division Bharatpur is responsible for the supervision monitoring of the works. Attention on the environmental issues, however, were seldom emphasized during supervision/monitoring of the road division  GESU has never visited	As per the Bridge Design Manual 2067 this bridge is a major bridge and requires IEE level study before implementation to comply with the EPR screening criteria.

S.No.	Bridges	Districts/ Location	Bridge Technical Features	EA process undertaking	Observed Environmental Issues	Monitoring Works	Remarks
					<ul style="list-style-type: none"> <li>ii. Labor Camps – Labor Camp conditions are poor for healthy living conditions to accommodate nearly 20 workers (Photo 12)</li> <li>iii. Occupational health and safety – Personnel protective equipments were not given to the construction workforce (Photo 13).</li> <li>iv. Construction waste and labor camp waste are disposed along the river flood plains – mechanism to dump the waste at specific safe sites is lacking (photo 14)</li> </ul>	the site for supervision/monitoring	
4	<p>Budhi Rapti River Bridge (Photo 15)</p> <p>Start of Construction – 2010</p> <p>Work completion – nearly 20%</p>	Chitwan/ Terai	<p>Bridge length 127m</p> <p>Approximately 50 m approach road on the RB and LB. Designed by bridge unit and construction supervision by Road Division Baharatpur</p>	<p>Has not undergone EA process. As per EPA screening criteria the bridge should have undergone IEE before implementation)</p>	<p><b>There is no active construction at site.</b></p> <p>Issues at the time of construction could not be observed directly. The discussions with the locals residing close by revealed the following issues:</p> <ul style="list-style-type: none"> <li>i. The flood plain and the river bed is greatly modified – choice of pier foundation technology is not appropriate to limit the disturbance to river flood plain – has consequence on the aquatic ecology vis a vis to the surrounding landscape.(Photo 16 and 17)</li> <li>ii. Labor Camps – Labor Camp conditions are poor for healthy living conditions to accommodate nearly 40 workers as revealed by locals</li> <li>iii. Occupational health and safety – Personnel protective equipments were not given to the construction workforce as revealed by locals</li> <li>iv. Construction waste and labor camp waste are disposed along the river flood plains – mechanism to dump the waste at specific safe sites is lacking as revealed by locals</li> </ul>	<p>The Road Division Baharatpur is responsible for the supervision monitoring of the works. Attention on the environmental issues, however, were seldom emphasized during supervision/monitoring of the road division</p> <p>GESU has never visited the site for supervision/monitoring</p>	<p>As per the Bridge Design Manual 2067 this bridge is a major bridge and requires IEE level study before implementation to comply with the EPR screening criteria.</p>



### **Annex 3: Existing Environmental /Social Policy and Legislative Framework/Guidelines, Directives, ESMF for the Development Projects including Bridge Sector**

The Interim Constitution of Nepal (2007), the development plans including current Three Years Interim Plan (2011/2013) and Nepal Environmental Policies and Action Plan (1993) provide a broad basis for environmental and social management in Nepal. These umbrella policies, in general, promote prevention of adverse impacts, protection and sustainable use of natural resource, equitable distribution of benefits, balancing development and environmental conservations etc. Nepal is party to or has ratified a number of international environmental conventions and treaty, which demonstrate that country is willing to move towards good international environmental practices.

Environmental provisions are scattered in several acts and regulations, such as Environment Protection Act 1997 and Environment Protection Regulation 1997; Forest Act 1993 and Forest Regulation 1995; National Park and Wildlife Conservation Act 1973 and Regulations; Aquatic Animal Protection Act (1960), Ancient Monument Preservation Act 1956. These acts and regulations, together, provide overall regulatory framework and defines process and procedures for environmental protection, conservation and management. In addition to the regulations, guidelines, directives, manuals, management frameworks and working procedures issued by various agencies provide further details and guidance in the process and procedures to be followed while conducting environmental assessment, disseminating information and consulting stakeholders, and integrating environmental findings with project planning, design and construction. These, for example, includes National Environmental Impact Assessment Guideline 1993, DOR Environmental Management Guidelines 1999, DOR Policy Document in Environmental Assessment in the Road Sector of Nepal 2000, Public Works Directives 2002, Manual for Environmental and Social Aspects of Integrated Road Development 2003, DOR Environmental and Social Management Framework 2007 (for road sector), and Working Procedure for the Allotment of Forest Area Land to Other Uses 2006.

Article 3 of the EPA makes an Environmental Assessment<sup>7</sup> in the form of Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA) mandatory. Implementation of a development activity/ project is not-allowed without approval of the respective IEE or EIA, if required. Schedule 1 and Schedule 2 of the EPR elaborates the requirements defining the projects / activities requiring IEE and EIA on the basis of sector/type, size, location/ sensitivity and cost. Project with potentially higher environmental risk is required to be subjected to full EIA. For example, any proposal will require full EIA if implemented in protected area, or environmentally weak and wet areas, or in historical/ cultural & archeological sites. Sectoral laws emphasize on the protection and conservation of natural resources, wild habitats (terrestrial and aquatic), protection of physical cultural resources, and avoidance or mitigation of adverse impacts on them. The Forest Act prohibits any activities within the forest area without prior approval of the concerned forest authorities; Forest Regulations as well as Work Procedure requires compensatory plantation (1 tree loss to be compensated by plantation of 25 trees). The

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<sup>7</sup> The EPA uses the term Initial Environmental Examination (IEE) for limited EA and Environmental Impact Assessment (EIA) for full EA.

National Parks and Wildlife Conservation Act prohibits a range of development<sup>8</sup> and other activities within the protected areas without written permissions of the concerned authorities – this generally discourages development activities inside the protected areas. Aquatic Animal Protection Act prohibits action that impinges upon the aquatic life and the Ancient Monument Preservation Act restricts excavations in places where ancient monuments are located and prohibits development works, which may adversely affect ancient monuments, without prior approval.

National Environmental Impact Assessment Guideline 1993 pre-dates EPA and EPR. The guidelines is applicable to all types of development projects including transport and bridge projects, and contains ingredients of best practice EA process and procedures. The National EIA Guidelines and EPR provisions define EA process and procedures in Nepal including screening, scoping, impact assessment, alternative analysis, information dissemination, and public and stakeholder consultations. DOR Environmental Management Guidelines 1999, the Policy Document (Environmental Assessment in the Road Sector of Nepal 2000), Reference Manual for Environmental and Social Aspects of Integrated Road Development 2003, and DOR Environmental and Social Management Framework 2007 (for road sector) highlights potential environmental and social issues in road sector and potential ways of avoidance, minimization and mitigations. Although the policy documents mentions bridge in passing, these documents are focus on issues in road development. Together, the mentioned documents provide basis for addressing and managing environmental and social aspects in DOR operation. Following are the salient feature: project proposal is subject environmental screening (against project type and size, and also against environmental sensitivity e.g. protected area), integrate environmental assessment as closely as possible with project cycle (feeding into planning, design, construction and operation, and hence helping the shaping of projects), and ensure dissemination of information to public and affected party, carry out public and stakeholder consultations. ESMF 2007, for example, suggest environmental considerations during road route (alignment) selection so that major environmental risk is avoided or minimized, the design details to consider minimization of environmental damage or to include damage protection measures, and selecting the least environmental damaging construction method (technology and practice) from among available. In addition, IEE or EIA where required, needs to assess alternative sites and technology/ design from environmental considerations. The workers and community health & safety aspects including labor camps and facilities, personnel safety gears etc are required to be part of each environmental mitigation or management plan.

DOR is mandated for development of roads and bridges under Strategic Road Network (SRN, i.e. roads under central government). The DOR environmental policy, guidelines, manual and ESMF are prepared for planning and development of roads rather than bridges. Bridges specific environmental issues are usually not covered. In theory, road and bridge may be considered as component of the same package. In practice, within DOR, bridges are planned and constructed under separate package.

## **Summary**

### Environment

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<sup>8</sup> Construction of structure, any harm or damage to forest resources and wildlife/ birds, digging, block/divert or adversely affect river/stream etc.

Despite proactive environmental policies, with the exception of Environment Protection Act and Environment Protection Regulation, the legislative frameworks across the sectors have yet to be amended in compliance to the national environmental policies and umbrella legislation on environment. Most of the sectoral legal frameworks are old and often create hurdles and conflict in the achievement of environmental management goals during project implementation.

There are a few of environmental guidelines in the transport sector even within the Department of Roads. But all of these guidelines are specific to environmental assessment of road planning, construction and operation. Bridge as an indispensable component of road and often executed under separate package has not been realized by the environmental guidelines so far prepared and implemented. Though the bridge projects could be planned and executed within the framework of the existing transport sector guidelines and management framework, the environmental issues of the bridge particularly aquatic environment/ecology and the wildlife migration/mobility need special attention apart from the physical and cultural resources.

### Social

The GON has developed various legislations, guidelines and manuals with the overall aim of reducing adverse social impacts of road construction and development which are also applicable to bridge sub-projects. Their enforcement and compliance is better in the projects funded by donors who are closely involved in project planning and implementation. In government funded projects, however, the extent to which the entire policy framework is implemented is limited much to those as required by IEE/ EIA. Implementation is often constrained by limited human and budgetary resources, coordination issues within DOR units.

### **Key Environmental Policies and Legislations**

- I) **The interim constitution of Nepal (2007)** under the fundamental rights recognizes rights relating to environment and health in Article 16 (1) and right to information in Article 27. Article 35 (5) under the policies of the state states “The state shall give priority to the prevention of adverse impacts in the environment from physical development activities, by increasing awareness of the general public about environmental cleanliness as well as to the protection of the environment and special safeguard of the rare wildlife. The state shall make arrangements for the protection of sustainable use of and the equitable distribution of benefits derived from the flora and fauna and biological diversity”
- II) **The Government of Nepal Three Years Interim Plan (2011/2013)**, a policy document for the plan period, states “From the Sixth Plan period various efforts are being made in policy level for the preservation of environment in Nepal. With the endorsement of internationally ratified treaties and conventions related to environment several programs have been developed and implemented to achieve the concept of sustainable development in Nepalese context. As per the expectations of the environmental laws Environmental Impact Assessment (EIA) task has been institutionalized by linking up environment management with development activities.”

- III) **Nepal Environmental Policies and Action Plan, 1993** endorsed by the government of Nepal has five main objectives: a) to manage efficiently and sustainably natural and physical resources; b) to balance development efforts and environmental conservation for sustainable fulfillment of the basic needs of the people; c) to safeguard natural heritage; d) to mitigate the adverse environmental impacts of the development projects and human actions; and e) to integrate environment and development through appropriate institutions , adequate legislation and economic incentives , and sufficient public resources.
- IV) **Environment Protection Act, 1997 and Environment Protection Regulation 1997** is an umbrella environmental act and rules governing the environmental matters of the country. Article 3 of the act mandates Initial Environmental Examination or Environmental Impact Assessment of the development projects as prescribed the Rule pertaining to the Act and prohibits development activities without the approval of IEE/EIA by the concerned agencies or Ministry (Article 4 of the Act).
- V) **Forest Act 1993 and Forest Regulation, 1995** emphasize on the protection and conservation of the forest resources and prohibits any activities within the forest area without prior approval of the concerned forest authorities (Section 11, Article 49, Section 13, Article 68).
- VI) **National Park and Wildlife Conservation Act, 1973** has an objective of the conservation, management and utilization of flora, fauna and scenery along with the natural environment of the national parks, reserves and conservation areas declared by the government. The Act prohibits entry into the national parks (Article 4) without prior approval of the concerned authority. The Act also prohibits a range of development and other activities (Article 5) within the national parks without permissions of the concerned authorities.
- VII) **Aquatic Animal Protection Act (1960)** has provisions for the protection of aquatic animals and matters there to. The Act prohibits action that impinges upon the aquatic life (Article 5). Prior information to the concerned technical officer impinging on the natural water body is mandated (Article 5B (1) and (2)).
- VIII) **Ancient Monument Preservation Act 1956** promulgated with explicit objective to protect ancient monument, restrict trade in archeological objects as well as excavations in places where ancient monuments are located. The Act prohibits development works which may impact ancient monuments without prior approval of the concerned authorities (Section 3, Article 5 and 8).

#### **Related Guidelines, Manuals, Directives and Work Procedures**

- I) **National Environmental Impact Assessment Guideline, 1993:** is a generic guideline on the process and procedures for the environmental assessment of the development projects and has all ingredients of the World Bank’s best practice process and procedures related to the environmental assessment of the development projects. It is also applicable for the assessment of the transport and bridge sector development works. As this pre-dates the Environmental Protection Act and is not referred as reference document under the Act and Regulation provision, its legality is in question.

- II) **Environmental Management Guidelines, DOR, 1997:** is the first guideline addressing the road sector. The main objective of the guideline is to ensure integration of environmental consideration in the project survey and design, tender documents, contract documents and supervision and monitoring. Though the guideline highlights on the environmental assessment process is focused more on the 12 areas of concerns for mitigation in the road development. Bridge as separate component of development in the road sector is not discussed.
- III) **Policy Document: Environmental Assessment in the Road Sector of Nepal, DOR 2000.** This provides an overall guidance in applying EPA and EPR in road sector in Nepal. Although screening criteria mentions bridges, the issues discussed and the provisions and guidance provided with regard to assessment, mitigation measures and monitoring are for the roads rather than bridges. The Policy explains the undertaking environmental screening, Initial Environmental Examination, Environmental Impact Assessment of roads following the provisions of the EPA and EPR. In higher risks projects (i.e. requiring EIA), the policy requires people in the affected area and also advocates analysis of alternative alignment of the proposed road.
- IV) **Public Works Directives 2002:** Prepared under the Financial Administration Regulation 2056, the Directive is the most comprehensive guideline document of the Government of Nepal designed to apply uniform procedures for public construction works. Beside other technical guidelines, the directives include comprehensive environmental procedural guidelines complying to the World Bank's best practice EA procedures in Part II, Volume A, Chapter 3 and in Volume B, Chapter 28. Bridge as separate component of development, however, is missing.
- V) **Manual for environmental and social aspects of Integrated Road Development, MoPPWTM/DOR, 2003:**
- VI) **Environmental and Social Management Framework, 2007:** is prepared for the Department of Roads (DOR) to compile in an overview and guidance manner, various safeguard and compliance aspects of environmental and social issues related with the Sector Wide Road Program and the Priority Investment Plan Study for Nepal's Strategic Road Network (SRN) planning for 2007 to 2016. It is also a comprehensive guideline document as the PWD directive and includes the process and procedures of EA process. It has identified potential issues in the transport sector and has come up with sets of mitigation and monitoring prescriptions which could be applied depending on the site conditions with modifications. It also highlights on the survey methods and tools to unravel the specific issues and impacts. Roles and responsibilities of the stakeholders have been elaborated with emphasis on the stakeholder co-ordination and consultation in all stages of the project planning, design, implementation and operation.
- VII) **Work Procedure for the allotment of Forest area land to other Uses, 2006:** This guideline sets procedure for the use of the forest area land for other purposes. Apart from this it also sets guidelines for the mitigation measures for compensatory afforestation for the loss of forest resources in the project occupied land areas.

## Key Social Policies and Legislations

- I) **The Interim Constitution 2007, Section 13, Part 3** ensures that all the citizens of the country are equal and no one will be deprived from equal treatment on legal ground. It further asserts that nothing shall be deemed to prevent the making of special provisions by law for the protection, empowerment or advancement of women, Dalits, indigenous people (Adivasi/ Janajati)<sup>9</sup>. **Clause number 2 of Article 19 of the Constitution 2007** refers about Rights to Property which states that except for public benefits the State cannot seize property of individuals. **Article 19 (3)** affirms that compensation shall be provided for such acquired property as prescribed by law<sup>10</sup>. and Article 33, (i) of Interim Constitution specifies that the State shall pursue a policy of providing socio-economic security including the land to the economically and socially backward classes including the landless, bonded labours, tillers and Harawa/Charawa. **Article 22, (1-5) Part 3, of the Interim Constitution 2007** clearly outlines the rights of children including social security as well as education, safety and health services for healthy physical and mental growth of the children.

The Interim Constitution further recognizes the status of all mother tongues as national languages, enabling their use in the governmental sector, and recognizes the rights of indigenous peoples to “participate in State structures on the basis of principles of proportional inclusion”, and authorizes the State to implement special measures “for the protection, empowerment and advancement of indigenous nationalities”.

- II) **The Three Year Interim Plan** of National Planning Commission (NPC) on Indigenous People 2007/08-2009/10 affirms to support for the policies and programs for indigenous peoples. It also contains policies for inclusive development of IPs and other disadvantageous groups by: (i) creating an environment for social inclusion; (ii) participation of disadvantageous groups in policy and decision making; (iii) developing special programs for disadvantaged groups, (iv) positive discrimination or reservation in education, employment, etc. (iv) protection of their culture, language and knowledge, (vi) proportional representation in development, and (vii) making the country’s entire economic framework socially inclusive.

- III) **The GON Interim Plan; Approach Paper 2011-2013**, in general, spells out various development programs including development of transport sector. The Plan ensures to upgrade people’s livelihood and standard of living through increased income and employment and improved access to various social services and promotion of economic activities by providing opportunities through harnessing the local resources and opportunities in various sectors.

- IV) **The National Transport Policy, 2001**. This policy, among others, states that the entire process of land acquisition and transferring of land ownership to the project shall be established prior to

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<sup>9</sup> The Interim Constitution of Nepal, 2007, GON.

<sup>10</sup> The Interim Constitution of Nepal, GON, 2007.

the commencement of road project implementation. At the same time, a basis for livelihood shall be established to the fully displaced families by way of rehabilitation or any other means.

**V) National Foundation for the Development of Indigenous Nationalities Act, 2002:** The NFDIN established the first comprehensive policy and institutional framework regarding indigenous peoples. The act defined indigenous groups or Adivasi Janajati in Nepali as "a tribe or community having its own territory, own mother tongue, traditional rites and customs, distinct cultural identity, distinct social structure and written or unwritten history". The government, through NFDIN, identified and officially recognized 59 such indigenous communities.

There are other recent legislations that address specifically the situation of and call for specific measures in relation to the Adivasi Janajati and other marginalized groups. These include the Local Self-Government Act (1999); the Three Year Interim Plan (2010); the 2007 amendments to the Nepal Civil Service Laws, Military Act and Police Regulation; and the Ordinance on Inclusion in Public Service (2009). The preamble to the Local Self-Governance Act, 2055 (1999) acknowledges the historical exclusion of indigenous communities and the need to incorporate them into the development process. The Civil Service Act includes a quota (reservation) system that specifies: "out of the 45 % of new recruitments reserved for various under-represented groups, 27 % are allocated to ethnic groups". The Ordinance on Inclusion in Public Service likewise demonstrates attention to the problem of under-representation by providing a quota system that benefits indigenous peoples.

The GoN has ratified International Labor Organization Convention No.169 and supported the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007. ILO 169 specifies that indigenous peoples have rights to the natural resources of their territories, including the right to participate in the use, management, protection and conservation of these resources. In this regard, Convention 169 has significant legal elements as a treaty, according to the Nepal Treaty Act.

**VI) Child Labor Act 2001:** Article 3, Clause 1 of the Act states that any child below the age of 14 years is prohibited for labor employment. However, Clause 2 states that it is prohibited to engage children below 16 years in works with risk prone sectors. In other words, children between 14-16 years may be engaged in light and low risk jobs.

**VII) Labour Act, 1992** Section 46 has special provision for construction enterprises. The provisions are related to: (a) tools and materials required by workers engaged in construction works<sup>11</sup>; (b) quarters, food, drinking water, etc. for workers in a temporary construction site where 50 or more workers work; (c) insure workers on construction sites against accidents; and (d) safety arrangements for construction sites, and arranging personal protective equipment for workers employed in construction works.

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<sup>11</sup> "construction works" means construction works of buildings, roads, bridges, canals, tunnels, internal and international waterways and railways, or installation of electrical, telephone or telegraph and other equipment, or machinery relating to telecommunications, or other works relating to construction.

**VIII) Land Acquisition Act, 1977.** The Act is the major guiding document that provides authority to the Projects/ Development Proponents to acquire land for development projects in the country. The Act mandates compensation at market value for all land acquisitions under public domain. It clearly states the process/ procedures and timeframe about acquiring private properties (land, house, crops and others) by paying compensation to the affected people as well as the institutional mandates and responsibilities for their implementation.

**IX) Public Road Act, 1974. The Act is the governing legislation for the construction and operation of roads in Nepal.** According to the Act, a Compensation Fixation Committee (CFC) will be formed to determine compensation in case of loss of assets, business, business or production. Provisions are also detailed out for compensation for the extraction of construction materials.

### **Related Guidelines, Manuals, Directives and Work Procedures**

**I) Public Work Directives (PWD), Part II, Chapter IV, DOR, GON, 2002.** The PWD is a major guiding document of the government on various aspects of project development. In addition to the technical information, the Directives provides step wise approach/mechanism about handling issues such as acquisition of private properties (land, structures, trees, community resources and facilities etc), valuation of assets, payments of compensation and Resettlement and Rehabilitation (R&R) assistance both to the title holders and non title holders i.e squatters and encroachers.

**II) Directives on Land Acquisition for Road Sector, DOR, 2002.** The Directive draw various information about land acquisition for the road projects by DOR. It also highlights the process of land acquisition as per the Act and compensation payment for the acquired properties including the roles and responsibilities of the Compensation Determination Committee (CDC) as well as participation of the representative of the project affected people.

**III) Land Acquisition Guidelines, 1989.** The guideline defines two categories of project affected families viz Project Affected Families (PAFs) and Seriously Project Affected Families (SPAFs). SPAFs are defined as those who lose over 25% of the total land holdings or whose land is reduced to an uneconomic holding i.e less than 5 Kattha or who is being displaced.

**IV) Environmental and Social Management Framework, DOR, 2007.** The framework is a comprehensive document of DOR which clearly provides outlines for identifying, planning, managing and monitoring of adverse social impacts in strategic roads that are constructed/ rehabilitated by the DOR. The document, specifically, provides information about the process and procedures to be followed at various stages of safeguards compliance i.e safeguard planning, implementation and monitoring including preparation of Resettlement Action Plan (RAP) in situation when involuntary resettlement is triggered by the project causing economic and physical displacement. The Resettlement Policy Framework (RPF), Chapter VII provides clear picture of the GON policies vis a vis donor policies, provides recommendations to bridge the gaps, details out the eligibility criteria for various categories of affected families and entitlements along with



the valuation procedures of assets by the CDC. Chapter VIII deals with the planning and preparation of Indigenous People Development Plan (IPDP)/Vulnerable Community Development Plan (VCDP) suggesting the outline structures. The framework also deals with the implementation modalities of measures, institutional arrangements/improvements, monitoring of social environmental interventions as well as in-house capacity building of DOR both in the short and long term. Over the last few years, the DOR/GESU and Consultants, to a large extent, have complied with this framework in all stages from planning to implementation as well as monitoring and reporting in World Bank funded Road Sector Development Project (RSDP) subprojects under additional financing.

- V) **Interim Guidelines for Enhancing Poverty Reduction Impact of Road Projects, DOR, August 2007.** The guidelines deals with various aspects of poverty reduction including links between road development and poverty reduction, planning and enhancing poverty reduction strategies in road projects at various stages, complementing poverty reduction activities and good practices in road projects, and planning, implementation and monitoring arrangements of poverty reduction impacts in road projects.

#### Annex 4. PforR Core Principles and Elements, National System Requirements and Key Findings

<b>Core Principle 1:</b> Environmental and social management procedures and processes are designed to (i) avoid, minimize or mitigate against adverse impacts; (ii) promote environmental and social sustainability in program design; and (iii) promote informed decision making relating to a program’s environmental and social effects.		
<b>Key Elements</b>	<b>System Requirements</b>	<b>Key Findings</b>
1.1 Bank program procedures are backed by an adequate legal framework and regulatory authority to guide environmental and social impact assessments <i>at the programmatic level</i>	<p>Partial</p> <p>The Interim Constitution of Nepal 2007, Nepal Environmental Policies and Action Plan, and Three Years Interim Plan promote integration of social and environmental aspects during formulation and implementation of development program. However, there is no act or policy that clearly articulates requirement for strategic or programmatic impact assessment. The provisions of sectoral acts (EPA/ EPR, Forest, National Park &amp; Wildlife Conservation, Land Acquisition, Child Labour etc) are attracted when specific invest/ activity is known.</p>	<p>Partial.</p> <p>Assessment of program’s potential effects on the environment and people is carried out in few programs (such as Road Sector Development) as an input to preparation of framework for managing effects during implementation.</p>
<p>1.2. Incorporate recognized elements of environmental and social assessment good practice, including:</p> <p>1.2a Early screening of potential effects</p>	<p><b>Yes – environmental screening is required for any development proposal.</b></p> <p>Pre-defined by the EPA and EPR<sup>12</sup> as IEE and EIA required projects based on project nature, size, financial threshold and sensitive areas. Only large bridge projects require IEE<sup>13</sup> but the definition of large scale is obscure. Bridge projects in the national parks require EIA<sup>14</sup>, small bridges may be excluded from IEE and EIA after screening. NEIAG, 1993<sup>15</sup>; Environmental Management Guidelines, DOR, 1997<sup>16</sup>;</p>	<p><b>Partial.</b> All roads under SRN are subject to environmental screening. Environmental Screening is only partially practiced in the case of bridges. The Environmental Management Guidelines (DoR 1999) suggest pre-screening during Project identification and prioritization and Environmental Screening during Pre-Feasibility Study. In practice, screening of DoR projects is commonly done at later dates.</p> <p>Only bridge in the national park or design and build bridges by the contractors above 100m length on SRN<sup>21</sup> have been screened for IEE study. The Department of Roads and the Bridge Project argue that the environmental provisions have been complied as the</p>

<sup>12</sup> Environment Protection Act 1997, and Environment Protection Regulation, 1997; schedule 1 and 2

<sup>13</sup> Environmental Protection Regulation, 1997, Schedule 1.D.4

<sup>14</sup> Environment Protection Regulation, 1997; Schedule 4.L.2

<sup>15</sup> National Environmental Impact Assessment Guideline, 1993; Chapter III.

<sup>16</sup> Environmental Management Guidelines, 1997, DOR; section 3

**Core Principle 1:** Environmental and social management procedures and processes are designed to (i) avoid, minimize or mitigate against adverse impacts; (ii) promote environmental and social sustainability in program design; and (iii) promote informed decision making relating to a program’s environmental and social effects.

Key Elements	System Requirements	Key Findings
	<p>Environmental Assessment in the Road Sector of Nepal (Policy Document) 2000<sup>17</sup>, Public Works Directives 2002<sup>18</sup>; Reference Manual for Environmental and Social Aspects of Integrated Road Development, 2003; Environmental and Social Management Framework, 2007<sup>19</sup> all has provisions requiring environmental screening.</p> <p>EPR requires IEE for construction of major bridge. Minor bridge, if not-located in the sensitive area, is exempted from environmental assessment. The DoR Policy Document suggests IEE for Major and medium bridges and approach roads, and also suggests screening against sensitive areas.</p> <p>Nepal Bridge Standard (2067)<sup>20</sup> defines major bridge of &gt;25 span or length &gt;50m (with smaller span) as major bridge.</p> <p><b>Scoping: Yes;</b> Formal Environmental Scoping is required for the project that fall under EIA category (NEIAG, 1993 ; Environmental Management Guidelines, DOR, 1997 ; Environmental and Social Management Framework, 2007 ). The scoping process requires pre-informed consultation with stakeholders, and potentially affected parties. However, formal scoping is not necessary for the IEE</p>	<p>road section where the bridges are made have undergone EIA or IEE and do not require separate EA for bridge. The road EIA and IEE, however, do not provide any details of the bridge locations, alternative, span, and length and also do not provision specific environmental mitigation measures for the bridge in the ESMF.</p> <p><b>Scoping: Partial,</b> scoping is done only for EIA required bridges (EIA is required only for bridge in the National Park Areas) . The IEE ToR is approved by the line ministry, which have mandates to define the scope of the study.</p>
1.2b consideration of strategic, technical, and site alternatives	<b>Partial</b> – Alternative analysis is included as a mandatory section in the TOR <sup>22</sup> and Report format <sup>23</sup> ; Public Works Directives <sup>24</sup> ,	<b>Partial,</b> Alternative section is presented in IEE and EIA reports which have undergone EA process, but alternative discussions is limited commonly to design alternatives and

<sup>21</sup> Initial Environmental Examination of Trishuli River Bridge Project, (Benighat Dhading – Arughat Gorkha Road) May 2010, and Initial Environmental Examination of Karnali (Geruwa) Bridge Project, Bardiya District, April 2011.

<sup>17</sup> Pages 6 and 7 (table 4 and table 5)

<sup>18</sup> Public Works Directives, 2002; Part II, Chapter 1, 3 and 4

<sup>19</sup> Environmental and Social Management Framework, 2007; Chapter 2

<sup>20</sup> Nepal Bridge Standard, 2067; Section 7,

<p><b>Core Principle 1:</b> Environmental and social management procedures and processes are designed to (i) avoid, minimize or mitigate against adverse impacts; (ii) promote environmental and social sustainability in program design; and (iii) promote informed decision making relating to a program’s environmental and social effects.</p>		
Key Elements	System Requirements	Key Findings
(including the “no action” alternative)	Environmental and Social Management Framework, 2007 <sup>25</sup> . The DoR Policy, in the case of EIA required projects, also requires consideration to at least one (and usually two) possible alternatives. Strategic alternative assessment is not included.	rarely covers site alternatives (usually ‘no project’ alternative). The strategic alternative is not covered. .
1.2c explicit assessment of potential induced, cumulative and trans-boundary impacts;	<p><b>Partial</b> <b>EPR</b><sup>26</sup> NEIAG<sup>27</sup>; Environmental Management Guidelines DOR<sup>28</sup>; Public Works Directives<sup>29</sup>; ESMF 2007<sup>30</sup></p> <p>Project development site specific assessment of potential impacts on physical, biological, social, cultural aspects are mentioned. But sector specific topical coverage, cumulative and trans-boundary impacts are not covered. Assessment of the indirect impact is suggested, which could cover induced impacts. The aquatic life and aquatic environment is usually not covered by the directives and guidelines. ESMF, however, has recognized the potential of disturbance to aquatic environments, and need of cumulative assessment is emphasized.</p>	<b>Partial</b> , only generic potential impacts are discussed. Most commonly direct impacts are assessed: assessment of indirect impacts is generally weak. Induced, cumulative and trans-boundary impacts are not covered.
1.2d Identification of measures	<b>Yes</b> . <b>EPR</b> <sup>31</sup> NEIAG <sup>32</sup> ; Environmental Management Guidelines DOR <sup>33</sup> ; Public Works Directives <sup>34</sup> ; ESMF <sup>35</sup> require identification	<b>Partial</b> . <i>Many of the measures identified for roads are also applicable to bridge</i>

<sup>22</sup> Environment Protection Regulation, 1997; schedule 3 and 4

<sup>23</sup> Environment Protection Regulation, 1997, Schedule 5 and 6

<sup>24</sup> Public Works Directives, 2002; Part II, Chapter 1, 3 and 4

<sup>25</sup> Environmental and Social Management Framework, 2007; Chapter 2

<sup>26</sup> Environment Protection Regulation 1997, Schedule 3,4, 5 and 6

<sup>27</sup> National Environmental Impact Assessment Guideline, 1993; Chapter VII.

<sup>28</sup> Environmental management Guidelines, 1997, DOR; section 2

<sup>29</sup> Public Works Directives, 2002; Part II, Chapter 3 and 4

<sup>30</sup> Environmental and Social Management Framework, 2007; Chapter 2 and 4

<sup>31</sup> Environment Protection Regulation 1997, Schedule 3,4,5,and 6

**Core Principle 1:** Environmental and social management procedures and processes are designed to (i) avoid, minimize or mitigate against adverse impacts; (ii) promote environmental and social sustainability in program design; and (iii) promote informed decision making relating to a program’s environmental and social effects.

Key Elements	System Requirements	Key Findings
<p>to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized</p>	<p>and recommendations of measures to avoid/ minimize or mitigate adverse impacts.</p> <p>DoR Environmental Management Guidelines and the ESMF describes potential issues and mitigations related to road construction activities, and the DoR Policy Document list potential problems and appropriate mitigations. ESMF has listed sector specific mitigation options. These documents, however, lack specific aquatic ecology conservation measures for bridge projects. Community health and safety from the traffic is addressed by road safety, air quality, noise level and ribbon development control measures. Apart from this for the occupational health and safety good practice measures have been incorporated which besides other include good living environment in the construction camps, provisioning and use of personnel protective equipments as per the nature of works, first aid provisions, good practice transportation, storage and housekeeping of the toxic and hazardous materials with specific sign boards for public safety and occupational health and safety.</p> <p><b>Mitigation Monitoring: Yes.</b> EPR<sup>36</sup> NEIAG<sup>37</sup>; Environmental Management Guidelines DOR<sup>38</sup>; DoR Policy Document<sup>39</sup>; Public Works Directives<sup>40</sup>; ESMF<sup>41</sup></p>	<p><b>construction. The bridges specific measures are usually not covered. The Bridges IEEs, where undertaken, recommend</b> generic mitigation measures lacking site specific requirements. The measures to avoid the impacts are not-common, the recommended mitigation measures are commonly to mitigate the impacts rather than to avoid or minimize. Review of the IEE documents and field observation of some of the selected ongoing bridge projects<sup>43</sup> reveals least care to environment during implementation. Implementation of mitigation measures is rested to proponent (Bridge Project) and the contractor, the cost calculated are on lump sum basis. No specifics of mitigation costs are included in the contract bid document<sup>44</sup>. Obviously, the mitigation aspects during project implementation are very weak.</p> <p><b>Mitigation Monitoring: Partial. Environmental monitoring by the ministry as required by the EPA/EPR happens rarely. Of late, DoR/GESU has initiated monitoring in a limited number of road projects. Some road projects also have hired independent consultant for environmental reviews of the practices in their roads. Environmental monitoring of bridge construction is rare.</b> Review of the approved EMP as a part of IEE report has the provisions with clear distinction of implementing and monitoring agency. Costs for monitoring is also allocated for front line (by a team of experts) and supervision monitoring by a range of stakeholders including Bridge Project and the GESU. Observation at site reveals limited monitoring of its works by the implementing agency whereas the environmental monitoring as per</p>

<sup>32</sup> National Environmental Impact Assessment Guideline, 1993; Chapter VIII.

<sup>33</sup> Environmental management Guidelines, 1997, DOR; section 2

<sup>34</sup> Public Works Directives, 2002; Part II, Chapter 3 and 4

<sup>35</sup> Environmental and Social Management Framework, 2007; Chapter 2, and 6

<sup>36</sup> Environment Protection Regulation, 1997, Schedule 3, 4, 5, and 6

<sup>37</sup> National Environmental Impact Assessment Guideline, 1993; Chapter X.

<sup>38</sup> Environmental management Guidelines, 1997, DOR; section 2

**Core Principle 1:** Environmental and social management procedures and processes are designed to (i) avoid, minimize or mitigate against adverse impacts; (ii) promote environmental and social sustainability in program design; and (iii) promote informed decision making relating to a program’s environmental and social effects.

Key Elements	System Requirements	Key Findings
	<p>EPA/ EPR mandates concerned agencies for project monitoring during construction and operation<sup>42</sup></p> <p>Internal monitoring responsibility is rested to the project manager or specialized consultant. The monitoring generic checklists provided in the DoR Policy Document are also intended for use by Project Manager and Division Chief in roads. In ESMF, types of monitoring (baseline, compliance and impact), monitoring mechanism (internal and independent), monitoring parameters, methods of monitoring, and frequency of monitoring is included. However, there is lack of monitoring parameters related to aquatic environments that is potentially affected by bridge projects. In ESMF, the internal monitoring responsibility is rested to Project Manager, DOR/GESU, MoPPW, Contractor and consultant including VDCs and User Groups. Independent monitoring is not conceived for natural environment.</p>	<p>the EMP by the frontline team of experts and other stakeholders is non-existent.</p>
<p>1.2e Clear articulation of institutional responsibilities and</p>	<p><b>Partial</b> EPA and EPR<sup>45</sup> make the project proponent responsible for implementation of the environmental mitigations recommended by the IEE or EIA including provision of necessary resources. NEIAG<sup>46</sup> institutional responsibilities are is</p>	<p><b>Partial</b>, The EMP as a part of the approved IEE document has identified the different institutional stakeholders and their responsibilities. The estimated resources, however, are in lump-sum and do not show how the resources will be mobilized. In practice, the allocated resources are not used as observed during the field visits. GESU is not-</p>

<sup>39</sup> Policy Document: Environmental Assessment in the Road Sector of Nepal, 2000, DoR pages 8 to 13

<sup>40</sup> Public Works Directives, 2002; Part II, 3 and 11

<sup>41</sup> Environmental and Social Management Framework, 2007; Chapter 2, 7 and 8

<sup>43</sup> Trishuli River Bridge Project, Benighat; Lamachaur - Hyngja Bridge Project, Pokhara; Budhi Rapti Bridge Project, Chitwan, and Khageri Bridge Project, Chitwan.

<sup>44</sup> Contract Bid document, Trishuli River Bridge Project

<sup>42</sup> Environment Protection regulation, 1997, Rule 13

<sup>45</sup> Environment Protection Regulation, 1997, Rule 4(1), 4(2), 4 (3), and 7(2).

<sup>46</sup> National Environmental Impact Assessment Guideline, 1993; Chapter X.

**Core Principle 1:** Environmental and social management procedures and processes are designed to (i) avoid, minimize or mitigate against adverse impacts; (ii) promote environmental and social sustainability in program design; and (iii) promote informed decision making relating to a program’s environmental and social effects.

Key Elements	System Requirements	Key Findings
resources to support implementation of plans	emphasized; PWD <sup>47</sup> and ESMF <sup>48</sup> detail the role of different institutional stakeholders in the environmental mainstreaming and ESMF implementation. However, enforcement of GESU mandates is weak and particularly resources to GESU are inadequate.	necessarily consulted for the environmental screening and commissioning of environmental assessment or for monitoring.
1.2f Responsiveness and accountability through stakeholder consultation, timely dissemination of program information, and through responsive grievance redress measures	<p><b>Yes</b></p> <p>IEE projects require a 15 days public notification after the approval of TOR<sup>49</sup>. For EIA projects prior 15 days public Notification is required for the preparation of Scoping Document and TOR<sup>50</sup>. EIA projects require public hearing before finalization of EIA report<sup>51</sup>. IEE Projects do not require public hearing. For EIA projects MOE through public notification disclose the report to public<sup>52</sup> for thirty-days. IEE projects are not mandated for public disclosure of the reports. ESMF<sup>53</sup>, PWD<sup>54</sup>, NEIAG<sup>55</sup> and</p> <p>DoR Environmental Management Guidelines <sup>56</sup> provides guidance in greater details for information disclosure at various stages of the assessment including identification stakeholders,</p>	<p><b>Partial.</b> Projects undergoing IEE/EIA disclose the information to the public as per the EPR<sup>61</sup> provisions, more as a formality. Hence, information disclosure and stakeholders consultations may not achieve the intentions.</p> <p><b>Grievance Redress Mechanisms - No:</b> Review of the selected approved IEE document has no provisions related to grievance redress mechanism. Site observation of selected projects as well does not have such mechanism existing at the ground level.</p>

<sup>47</sup> Public Works Directives, 2002; Part II, 3 and 11

<sup>48</sup> Environmental and Social Management Framework, 2007; Chapter 2, and 9

<sup>49</sup> Environment Protection Regulation, 1997, Rule 7 (2)

<sup>50</sup> Environment Protection Regulation 1997, Rule 4 (1)

<sup>51</sup> Environment Protection Regulation, Rule 7 (2)

<sup>52</sup> Environment Protection Regulation, Rule 11 (2)

<sup>53</sup> Environmental and Social Management Framework, 2007; Chapter 2, and 5

<sup>54</sup> Public Works Directives, 2002; Part II, chapter 3 and 4

<sup>55</sup> National Environmental Impact Assessment Guideline, 1993; Chapter IV, IX and XIII

<sup>56</sup> Environmental management Guidelines, 1997, DOR; section 2

**Core Principle 1:** Environmental and social management procedures and processes are designed to (i) avoid, minimize or mitigate against adverse impacts; (ii) promote environmental and social sustainability in program design; and (iii) promote informed decision making relating to a program’s environmental and social effects.

Key Elements	System Requirements	Key Findings
	<p>various techniques of information disclosure apart from the legal public notification mandates for IEE and EIA projects as well as process of public consultation and information disclosure and involving peoples and communities at various stages of project development.</p> <p><b>Grievance Redress Mechanisms: Partial. The EPR<sup>57</sup> has provisions regarding complaints arising from emission of pollution and wastes: CDO is mandated to hear and take action on the pollution and wastes related complaints.</b> However, the EPR provision is not explicit enough to cover other environmental grievances.</p> <p>The ESMF<sup>58</sup> requires each subproject to have grievance redress mechanism and proposes a three-stage procedure for redressing complaints. ESMF recognise grievance redress as a tool to minimise the conflict by addressing the concern at the early stage at site level, but such mechanism is limited to land acquisition and compensation issues only. In PWD<sup>59</sup> and NEIAG<sup>60</sup>, there is no specific provisions except for requirement of public consultation in all stages of project execution.</p>	

<sup>61</sup> Environment Protection Regulation, 1997, Rule 7 (2)

<sup>57</sup> EPR Rule 17 and 45

<sup>58</sup> Environmental and Social Management Framework, 2007; Chapter 7

<sup>59</sup> Public Works Directives, 2002; Part II, chapter 3 and 4

<sup>60</sup> National Environmental Impact Assessment Guideline, 1993; Chapter IV, IX and XIII



**Core Principle 2: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.**

Key Elements	System Requirements	Key Findings
<p>maconversion of natural habitats is not technically feasible, includes measures to mitigate or offset impacts or program activities.</p>	<p><b>Yes;</b> EPR schedule 1 and 2 has used screening criteria based on natural habitats. Projects in critical natural habitats (National park, wildlife reserve, Wetlands, Conservation area) require EIA. National Park and Wildlife Conservation Act 1973<sup>62</sup> prohibits physical infrastructure development without the permission of Warden. Aquatic Animal Protection Act, 1960<sup>63</sup> prohibits actions of physical infrastructure projects that restricts movement of aquatic life. Forest Guideline, 2006<sup>64</sup>; requires IEE and EIA study showing various alternatives for the project to minimize the loss of forest area and resources. Guideline for the development of physical infrastructures in the protected area, 2008; Department of Forests and Soil Conservation has provisions to allow physical infrastructure development to the national priority projects only. However, it will have to take prior permission from concerned authority for project planning</p>	<p><b>Yes,</b> EA is undertaken for bridge projects implemented in the National park areas of natural habitat significance.</p> <p><b>Yes,</b> Prior approval of Department of National Parks and Wildlife Conservation is taken apart from</p>

<sup>62</sup> National Park and Wildlife Conservation Act, 1973, Section 5

<sup>63</sup> Aquatic Animal Protection Act, 1960, Section 5.

<sup>64</sup> Forest Guideline for the Development of Projects in the Forest Area, 2006.

**Core Principle 2: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.**

Key Elements	System Requirements	Key Findings
	<p>and comply with the EPR provisions.</p> <p><b>Yes</b>, National Park and Wildlife Conservation Act 1973<sup>65</sup> prohibits physical infrastructure development without the permission of Warden. Guideline for the development of physical infrastructures in the protected area, 2008; Department of Forests and Soil Conservation requires mitigation measures as stipulated in Forest Guideline 2006. ESMF<sup>66</sup> has made provisions for protection and enhancement of the natural habitats in the project development sites. Forest Guideline<sup>67</sup> requires IEE and EIA study showing various alternatives for the project to minimize the loss of forest area and resources. The guideline also provisioned the mitigation options including plantation of 25 trees for the loss of one tree.</p>	<p>the environmental studies as required by the Act and Regulation.</p>
<p>2.3 Takes into account potential adverse effects on physical cultural property and, as warranted, provides adequate measures to avoid, minimize, or mitigate such effects</p>	<p><b>Yes</b>; EPR schedule 1 and 2 has used screening criteria based on Physical/cultural resources. Projects in historical, cultural and archeological locations require EIA irrespective of the</p>	<p><b>Yes</b>, In practice all bridge projects implemented and under implementation have avoided areas of physical and cultural significance</p>

<sup>65</sup> National Park and Wildlife Conservation Act, 1973, Section 5

<sup>66</sup> Environmental and Social Management Framework, 2007; Chapter 2, and 6

<sup>67</sup> Forest Guideline for the Development of Projects in the Forest Area, 2006.

**Core Principle 2: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.**

Key Elements	System Requirements	Key Findings
	<p>project nature. Ancient Monument Protection Act, 1956<sup>68</sup> requires prior approval of the Department of Archeology for the development works. All objects more than 100 years of age are restricted for transfer from site and trade. ESMF<sup>69</sup> stress to avoid the sites of cultural and historical importance and if unavoidable requires reporting to concerned authorities as well as on public consultation at various stages of project development to build consensus among the stakeholders. The DoR Environmental Management Guidelines<sup>70</sup> defines procedures for cultural/archeological “chance find”.</p>	

<sup>68</sup> Ancient Monument Protection Act, 1956, Section 3 and 13

<sup>69</sup> Environmental and Social Management Framework, 2007; Chapter 2 and 4

<sup>70</sup> DoRDOR Environmental Management Guidelines, DoRDOR, 1999, Section 4.3

**Core Principle 3: Program procedures ensure adequate measures to protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices developed or promoted under the program; (ii) exposure to toxic chemicals, hazardous wastes and otherwise dangerous materials.**

Key Elements	System Requirements	Key Findings
<p>3.1 Ensures adequate community, individual and worker safety through the safe design, construction, operation and maintenance of physical infrastructure, or in carrying out activities that may be dependent on such infrastructure with safety measures, inspections or remedial works incorporated as needed.</p>	<p><b>Partial. There is no clear provisions in the EPA and EPR. However, ESMF; Chapter 6, section 6.2.2, ii, (3) c &amp; d has provisioned mitigation provisions for the safety of communities and occupational health workers.</b></p> <p><b>Partial. There is no provisions in the Acts and Regulations. ESMF, Chapter 6, Section 6.2.2, ii,(1), m has provided a range of preventive, mitigative, and compensatory measures for the management of explosive, combustible and toxic materials.</b></p>	<p><b>Partial,</b> workers health and safety is not a priority issue to the contractors in the on going bridge projects. Experiences in the ongoing road construction also supports above observations.</p> <p><b>Partial,</b> only applicable, if the material for storage has value at the open market.</p>

**Core Principle 4: Land acquisition, displacement and loss of access to resources is avoided or minimized; and affected people are assisted in improving, or at least restoring, their livelihoods and living standards**

Key Elements	System Requirements	Key Findings
<p>4.1. Avoid or minimize land acquisition and related adverse impacts;</p>	<p><b>Yes.</b> This is expressed in the relevant IEE and EIA requirements that also cover the social aspects. THE DOR ESMF has clear provisions reflecting this principle.</p> <p>Article 34, Clause 1 of the Land Acquisition Act, 1977 specifies that the excess land acquired by GON or unnecessary land which is not used for the said purpose should be returned to the original land owners which is implicit to minimization of land acquisition.</p>	<p>Yes. This is followed up through the IEE and EIA process that includes land acquisition as well. However, the performance in this regard varies across the program and needs significant improvement.</p>
<p>4.2. Identify and address all economic and social impacts caused by land acquisition or loss of access to natural resources, including those affecting people who may lack full legal rights to assets or resources they use of occupy;</p>	<p><b>Yes.</b> The LAA has clear provisions and procedures in this regard when it comes to land and titleholders. However, it does not recognize non-land related impacts nor does it cover people without titles.</p> <p>Non-land related impacts and impacts on non-title holders are covered in a few other guidelines, frameworks and manuals which emphasize on avoiding, minimizing and/ or mitigating the adverse impacts affecting the standard of living of project affected people due to acquisition of land and land based properties, their employment and income. The Public Work Directives (PWD), Chapter IV: Social Assessment, 2002<sup>71</sup>, the Reference Manual for Environmental and Social Aspects, 2003<sup>72</sup> and the ESMF<sup>73</sup>, 2003 have provided clear outlines/ steps for detailed impact assessment and providing fair compensation and rehabilitation measures to the adversely affected families for the restoration/ improvement of their livelihood including the non-</p>	<p><b>Yes, but limited and weak.</b> This is implemented as part of the IEE and EIA under the LAA, and is largely limited to titleholders. The DOR ESMF, which fills the policy gaps on non-title holders, has a better performance in internationally financed projects. Performance in domestic operations needs much improvement.</p> <p><b>Nontitle holders: Yes, but partially.</b> This is only implemented in internationally funded investment projects, but only in domestic projects under the LAA.</p>

<sup>71</sup> Public Work Directives , Part II, Chapter IV, DOR, GON, 2002

<sup>72</sup> Reference Manual for Environmental and Social Aspects of Integrated Road Development, DOR, 2003.

<sup>73</sup> Environmental and Social Management Framework (ESMF), DOR, 2007.

**Core Principle 4: Land acquisition, displacement and loss of access to resources is avoided or minimized; and affected people are assisted in improving, or at least restoring, their livelihoods and living standards**

Key Elements	System Requirements	Key Findings
	<p>title holders.</p> <p>The DOR ESMF reflects these principles specifically for the transport sector. It establishes the resettlement and compensation principles, organizational arrangements and design criteria to be applied to meet the needs of the people who may be affected by involuntary resettlement viz land acquisition, loss of shelter, assets or livelihoods, and/or loss of access to economic resources<sup>74</sup>.</p> <p><b>Nontitle holders: Yes.</b> The DOR ESMF requires that all those adversely affected, but do not have legal rights or titles to land at the time of the census, particularly those poor and vulnerable households will be recognized for assistance in their livelihood restoration and improvement. This sector policy fills the policy gap in this area in the LAA</p>	
<p>4.3 Provide prior compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid prior to taking of land or restricting access;</p>	<p><b>Partially Yes;</b> According to LAA, 1977, compensation is paid for all assets at market value, which is real market value and represents replacement cost for land. The LAA does not provide so for structures where depreciation is generally applied and does not deliver full replacement cost.</p> <p>However, for transport sector programs, the DOR ESMF has taken a step further to address this gap. It clearly states about compensation payment at replacement values for loss of assets / properties of any type as per decided by CDC. While fixing the rates for losses, the CDC should have the representation of affected people / communities to ensure that compensations are</p>	<p><b>Yes, partially.</b> In domestic projects, land required for the projects are acquired as per the LAA and compensations are paid at market value per government's prevailing norms/ regulations and depreciation is applied for structure compensation. In internationally funded operations, the DOR ESMF is followed where market value and replacement costs are applied in compensation.</p>

<sup>74</sup> Environmental and Social Management Framework (ESMF), DOR, 2007.

**Core Principle 4: Land acquisition, displacement and loss of access to resources is avoided or minimized; and affected people are assisted in improving, or at least restoring, their livelihoods and living standards**

Key Elements	System Requirements	Key Findings
	fair enough to cover the losses of all types.	
4.4 Provide supplemental livelihood improvement or restoration measures if taking of land causes loss of income generating opportunity (e.g. loss of crop production or employment)	<b>Yes, both the DOR ESMF and the Interim Guidelines</b> emphasizes on the provision of appropriate livelihood/ employment and income generation assistance to the affected people including the socially and economically poor and vulnerable groups in their resettlement and rehabilitation of livelihoods.	<b>Yes and partially.</b> This is only implemented in internationally funded operations.
4.5 Restore or replace public infrastructure and community services that may be adversely affected;	<b>Yes, this is reflected the relevant IEE and EIA policies. The DOR ESMF</b> requires restoration of affected/ damaged community buildings and structures in consultation with affected communities and relevant authorities. It also specifies restoration before commencement of the project where necessary in consultation with the community...	<b>Yes and partially.</b> Although the need for the restoration of lost/ affected infrastructures is not explicitly mentioned, the restoration/ rehabilitation varies from project to project. The affected communities, CDCs and Projects are the key actors to plan, decide for the restoration of the lost facilities/ infrastructures which depend on their mutual understanding and agreement. But these are not planned in advanced as in case of donor funded projects.

**Core Principle 5: Due to consideration is given to cultural appropriateness of, and equitable access to, program benefits, with special emphasis provided to rights and interest of indigenous peoples, as well as the needs or concerns of vulnerable groups**

Key Elements	System Requirements	Key Findings
<p>5.1 Free, prior, and informed consultation are undertaken if indigenous people are potentially affected (positively or negatively) to determine whether there is broad community support for program activities.</p>	<p><b>Yes.</b> These principles are expressed in scattered provisions in various government acts, policies and decrees as summarized earlier. They are more expressly stated in the International Labor Organization Convention No.169 and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007, which the government has ratified and are legally binding in Nepal. They are stated in the DOR ESMF for the transport sector.</p>	<p><b>Yes, partially.</b> Although It is one of the mandatory functions of the government as per the national policies, there are no well established mechanism/ systems in place to conduct consultations and information sharing/ dissemination. In case of projects implemented by DOR, , there is a mechanism within its set up for conducting consultations and providing prior information to the project beneficiaries and adversely affected people, particularly to indigenous communities. This is better implemented in projects financed by international organization. However, the performance is not as extensive.</p>
<p>5.2 Ensure that indigenous can participate in devising opportunities to benefit from exploitation of customary resources or indigenous knowledge, the latter to include the consent of indigenous people</p>	<p><b>Yes. NFDIN's long term vision</b> is to bring improvement in social, cultural and economic conditions of indigenous nationalities through their enhanced participation. This principle over access to natural resources by indigenous communities are expressly stated in the International Labor Organization Convention No.169 and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007, which the government has ratified and are legally binding in Nepal. They are stated in the DOR ESMF for the transport sector.</p>	<p><b>Yes, but limited.</b> The GON's development programs/ projects require active participation of project beneficiaries. It is also a major strategy to involve the people in all development projects and promote/ exploit local level opportunities for livelihood improvement of people. The GON, however, lacks effective working mechanism to promote the use of indigenous resources/ knowledge and to benefit the targeted groups at large on a sustained basis. Similarly, there is a difference in terms of efforts and effects in domestic and internationally financed operations.</p>
<p>5.3 Program planning and implementation includes attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, the elderly, or marginalized</p>	<p><b>Yes.</b> Social exclusion is a major factor in constraining development in Nepal and the marginalized and vulnerable groups are widely recognized in the country. This principle is endorsed and expressed through various scattered provisions in relevant government acts, rules and policies. Bridge programs provide a unique opportunity to target remote and</p>	<p><b>Yes.</b> The bridge program is designed very often in response to local community needs, particularly in remote and isolated areas who are often the underdeveloped areas. Poor and vulnerable communities are among the key beneficiaries.</p>



<p>ethnic groups. If necessary, special measure are taken to promote equitable access to program benefits</p>	<p>isolated communities who are often suffering from lack of access to public services, partially due to road access. For the transport sector, the DOR ESMF provides measures to address the issues of vulnerable people including their definition, and preparation of Vulnerable People Development Plan (VPDP) along with international good practices of poverty reduction in road projects. It also guides about planning and implementation of poverty alleviation measures; preparation of indigenous People Development Plan (IPDP) along with a sample summary report of IPDP including consultation, disclosure procedures and institutional framework as well as monitoring system and source of budge. The ESMF/ DOR, 2007 also provides outlines to address the issues of vulnerable people who are adversely affected by the project.</p>	
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**Core Principle 6: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.**

Key Elements	System Requirements	Key Findings
<p>6.1 Considers conflict risks, including distributional equity and cultural sensitivities</p>	<p><b>Partial</b></p> <p>Local level (site level) social / cultural sensitivity and conflict issues are covered under requirements for environmental and social assessments, as described in ESMF and other document described earlier. There is no requirement for conflict analysis at program level.</p>	<p>The territorial dispute is not relevant for this BIMSP.</p> <p>This bridge program is designed to make the existing road trafficable round the year and hence improve accessibility. Bridge often has high local demand. Therefore, it is unlikely to exacerbate social conflict. However, site level grievances related mainly to construction activities may be possible, which can be managed locally following the guidance provided in the ESMF.</p>

Annex-5

**Social and Environmental Management (Transport/Bridge Sector) -Institutional Set up and Roles in the Bridge EA Process**

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
<b>National Policy/Planning Level</b>	<b>National Planning Commission</b>	i. Financial Administration Division ii. Social Development Division iii. Infrastructure Development Division iv. Agriculture and Rural Development Division v. Monitoring and Evaluation Division vi. Human Resource Division	i. Infrastructure Development Division	i. Building, Urban Development, Road and other transportation section ii. Energy, Information Communication, Science and Technology and Environment Section	<b>No direct role or responsibility in EA process</b> of the bridge projects	It is the apex body for the preparation of development plan Base/Approach Paper for the plan period and selection and prioritization of the bridge projects for development and budgeting by the Ministry of Finance. Is also responsible for the formulation and mainstreaming of national environmental policies across the development sectors.
<b>Ministry Level</b>	<b>Ministry of Environment (MoE)</b>	i. Environment Division ii. Climate Change Management Division iii. Planning,	Environmental Division	i. Environmental Evaluation Section (EIA review and approval also covering social impacts)	<b>Directly responsible.</b> It is the apex authority in the matters related to environment. It reviews the EIA documents of the bridge projects and has authority to give environmental	It has the responsibility of formulating environmental policies for

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
		Evaluation and Administrative Division		<ul style="list-style-type: none"> <li>ii. Environmental Pollution Control and Evaluation Section</li> <li>iii. Environment Standard Section</li> <li>iv. Environment Promotion and Fund Administration Section</li> </ul>	<p>approval for the bridge project development. It has power to delegate its approval authority for IEE level projects to the concerned agency (other sector ministry and sector departments). It has the authority to set pollution standards for emissions, effluents and other discharges into the environment. It has the authority of project environmental audit, and monitoring/supervision of compliance to environmental pollution and environmental approval conditions. It has the authority to penalize developer and prohibit the development works not complying the pollution standards and environmental approval conditions.</p>	<p>approval from higher authority (Environment Protection Council, National Planning Commission). Mainstreaming the cross sectoral agencies in the matters related to environment policy and EA process is the other responsibility of this ministry. It has authority to prepare draft based on wider consultation with the cross sectoral stakeholders for amendments in the EPR provisions for approval from the Cabinet of Ministers.</p>

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
	<b>Ministry of Physical Planning and Works (MoPPW)</b>	<ul style="list-style-type: none"> <li>i. Administration Division</li> <li>ii. Foreign Aid and Quality Standard Division</li> <li>iii. Physical Planning Division</li> <li>iv. Water and Sanitation Division</li> <li>v. Works Division</li> <li>vi. Planning, Monitoring and Evaluation Division</li> </ul>	<ul style="list-style-type: none"> <li>i. Planning, Monitoring and Evaluation Division (IEE review and approval, EIA stakeholder review and forwarding to MOE)</li> <li>ii. Works Division (short and long term planning based on review of pre-feasibility, feasibility studies, render advice to MoPPW on all the technical, financial, social and environmental aspects and co-ordinate with the line ministries and the concerned Divisions of ministry for quality standards, implementation, evaluation and monitoring)</li> </ul>	The Planning, Monitoring and Evaluation Division does not have a separate section to look into the matters of environment.	<p><b>Directly responsible.</b> As per the delegated power by the Ministry of Environment, it has following roles in the EA process for bridge.</p> <ul style="list-style-type: none"> <li>a. Review the EIA documents of the bridge project and forward it to MOE with its comments and concerns for approval.</li> <li>b. Participate in the EIA review meetings of MOE and give comments and consents on the IEA documents</li> <li>c. Review the IEE documents and give environmental approval as per the provisions of EPA and EPR</li> <li>d. Monitoring and evaluation of the bridge project as per approval conditions of EIA and IEE</li> <li>e. Provide directives to the developer in case of non-compliance with a copy to MOE</li> </ul>	<p>Co-ordination with the MOE and other sectoral Ministries such as MOFSC in the drafting of the sectoral and cross-sectoral environmental policies.</p> <p>Review of the bridge project proposed by the department of roads and</p> <p>Selection and prioritization of the bridge projects and forward to the Planning commission for approval and financing.</p> <p>Conduct or direct related sections, departments and line offices for the conduction of pre-feasibility and feasibility</p>

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
						studies of the approved projects. Implement or direct related sections, departments and line offices for the implementation of the approved projects.

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
	<b>Ministry of Forests and Soil Conservation (MoFSC)</b>	<ul style="list-style-type: none"> <li>i. Administration Division</li> <li>ii. Monitoring and Evaluation division</li> <li>iii. Planning and Human Resource Division</li> <li>iv. Foreign Aid Co-ordination Division</li> <li>v. Environment Division</li> </ul>	i. Environment Division (All matters related to environment and Bio-diversity)	<ul style="list-style-type: none"> <li>i. Environment Section (Consultation with the line departments and offices and initiation of proposals to Cabinet for permission to clear vegetation from forest areas after review of IEE/EIA documents</li> <li>ii. Bio-diversity Section</li> </ul>	<p><b>Indirect role.</b> The projects which affect the forest areas, it has the following roles in the EA process in the preparation and implementation stages.</p> <ul style="list-style-type: none"> <li>a. Give approval for the EIA study in areas of National Parks.</li> <li>b. Participate in the IEE EIA review meetings of the MOE and other sectoral ministries and give comments and consent of the MOFSC where forest areas are impacted.</li> <li>c. Prepare proposal for forest clearance and forest land allocation for the approved IEE and EIA projects to Cabinet of Ministers for approval.</li> <li>d. Provide directives to the line departments of MOFSC for tree enumeration, numbering, clearance activities etc. in the approved allocated forest areas as per the request of developer during implementation</li> <li>e. Provide directives to the line departments of MOFSC for the implementation of forest related mitigation measures of the approved IEE/EIA documents from the side of the developer</li> </ul>	Co-ordinate with the MOE and other cross-sectoral ministries for the preparation of sector related environmental policies
	<b>Other Sector Ministries (concerned with Transport and</b>	Number of divisions and their functions vary from ministry to ministry	In the Ministry of Energy (MoEn) and Ministry of Irrigation (MoI) Policy and Foreign Co-ordination Division is the concerned section related to environmental matters;	In the Policy and Foreign Co-ordination Division of MoEN and MoI a separate Environmental Sections looks into the matters	<b>Indirect role.</b> The other sectoral ministries are involved in the EA process only in conditions that the bridge projects affects the matters under their jurisdictions. The major roles and responsibilities of the other	Co-ordinate with the MOE and other cross-sectoral ministries for the preparation of sector related

	Institutions	Nos. of Divisions/Sections	Concerned Division/Sections/Branch	Concerned Sections/Unit	Role in EA Process /Bridge	Other Roles
	<b>Bridge)</b>		In the ministry of Local Development Municipal Management Division is the concerned division related to environment; In the Ministry of Industry (MoIn), The Technology Division is the concerned division with the environment. In other secotral ministries the Planning Division/Section usually is the concerned Division/Section for environmental related matters.	related to environment;  In the Municipal Division of MoLD, a separate environment section looks into the matter related to environment. In other ministries there is no separate section/unit to look into environment related matters.	sector ministries are:  a. Participate in the IEE EIA review meetings of the MOE and other sectoral ministries and give comments and consent of the ministry concerned on the affects of the project. b. Provide approval for the project implementation once IEE/EIA document is approved with conditions of mitigation c. Provide directives to the line departments and offices to assist the developer in the approved conditions.	environmental policies.
<b>Department Level</b>	<b>Department of Roads</b>	<ul style="list-style-type: none"> <li>i. Administrative section</li> <li>ii. Financial Administration Section</li> <li>iii. Project Directorate</li> <li>iv. Mechanical Branch</li> <li>v. Foreign Co-operation Branch</li> <li>vi. Planning and Design Branch</li> <li>vii. Maintenance Branch</li> </ul>	i. Planning and Design Branch	<ul style="list-style-type: none"> <li>i. Geo-Environmental -Social Unit (GESU), Screening for environmental study (IEE/ EIA) from the list of planned projects; IEE EIA study, review and forwarding to MoPPWTM</li> <li>ii. Bridge Unit – Preliminary planning, pre-feasibility study and generation of alternatives, Feasibility study and design</li> <li>iii. Road Sector Skill Development Unit for skill enhancement of DOR staffs</li> </ul>	<p><b>Directly responsible.</b> GESU has the following role to play in the EA process of the bridge projects.</p> <ul style="list-style-type: none"> <li>a. Screen bridge projects for IEE or EIA as per EPR provisions</li> <li>b. Conduct or outsource experts or consulting firms to conduct IEE and EIA studies as per the EPR provisions</li> <li>c. Review Scoping Document/Terms of Reference of EIA/IEE study and IEE and EIA studies and forward to MoPPWTM with its consent and comments on the documents for approval processing</li> <li>d. Participate as concerned stakeholder in the review meetings of Scoping document, TOR, IEE and EIA documents organized by the MoPPWTM and MOE and give their consent</li> </ul>	<p><b>GESU</b> - co-ordinate with MoPPWTM for the drafting of the sectoral environmental policies and assist MoPPWTM in the drafting of the cross – sectoral environmental policies.</p> <p><b>Bridge Unit</b> - Conduct or outsource to conduct</p>



	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
			<b>ii.</b> Maintenances Branch	including environment and social safeg.  i. Development Unit ii. Contract Document Unit iii. Regional Directorate (5) and Divisions (25)	and comments e. Co-ordinate with the sectoral and cross- sectoral ministries and departments for approval and permits such as MOFSC, Ministry of Energy, Department of Forests, Department of National Parks and Wildlife Conservation, Department of Irrigation, Department of Archeology etc. during project preparation and implementation f. Conduct or outsource to conduct environmental and social monitoring of the project under implementation g. Public disclosure of the EA process and documents	prefeasibility and feasibility study of the bridge project as directed by MoPPWTM in co-ordination with GESU; Implement or outsource for implementation of bridge project in co-ordination with GESU for environmental matters; Prepare contract bid documents in co-ordination with GESU to incorporate environmental costs in the bid document
	<b>Department of Forests</b>	i. National Forest Division ii. Planning and Monitoring Division iii. Community forest Division iv. Others	i. Planning and Monitoring Division	i. Monitoring and Evaluation section	<b>No direct role in EA process</b> except assisting/providing suggestions to MOFSC on matters related to forest for allocation of forest area to the development projects.  Conduct forest area demarcation for allocation, numbering of trees and implementation of mitigation	Assist and co-ordinate with MOFSC for the formulation of sectoral and cross –sectoral environmental policies related

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
					measures as directed by MOFSC during project implementation in co-ordination with the developer and sectoral ministry/Departments	to forests.
	<b>Department of National Parks and Wildlife Conservation</b>				<p><i>No direct role in EA process</i> except assisting/providing suggestions to MOFSC on matters related to EIA study permission in the National Parks, Reserves, and conservation areas and allocation of forest area to the development projects which have accomplished EA process.</p> <p>Conduct forest area demarcation for allocation, numbering of trees and implementation of mitigation measures as directed by MOFSC during project implementation in co-ordination with the developer and sectoral ministry/Departments</p>	Assist and co-ordinate with MOFSC for the formulation of sectoral and cross –sectoral environmental policies related to National Parks, Wildlife Reserves and Conservation Area.

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
<b>Regional Level</b>	<b>Regional Road Directorate</b>				<i>No role in EA process</i>	Supervision of the bridge projects of the region implemented by the Road Division Office. Review, priorities and forward to Bridge Unit of the Department of Roads the new bridge projects and maintenance of the old bridges proposed by the Road Division office for development planning.
	<b>Regional Forest Directorate</b>				<i>No role in EA process</i>	Supervision of the forestry related activities of the region implemented by the District Forest Office
	<b>Regional Administrative Office</b>				<i>No role in EA process</i>	Supervision of the law and order situation of the Region

	Institutions	Nos. of Divisions/Sections	Concerned Division/Sections/Branch	Concerned Sections/Unit	Role in EA Process /Bridge	Other Roles
<b>District Level</b>	<b>Road Division Office</b>				<p><i>No role in EA process during project preparation stage, however, during implementation stage, as it is the primary implementing organ of the Bridge unit, it has a role of construction supervision including environmental mitigation implementation compliance on day to day basis.</i></p> <p>As it outsource implementation contractor and prepare contract bid document it has the role to incorporate the environmental costs of civil works in the bid document in co-ordination with GESU based on the approved IEE/EIA documents as well as SEMP/EMP. Apart from this it has to co-ordinate with the district forest office and other sectoral line offices for permission, and execution of the project as required by the sectoral offices.</p> <p>Land and property acquisition required is also implemented by the division office and has to co-ordination with District Administration Office, District Survey Office, Land Revenue Office including GESU. It also has to function as front line grievance</p>	It has the role to identify new bridge development projects in consultation with the communities and as required for the overall transportation link development and maintenance of the old bridges within the jurisdiction of the division office and priorities and forward to the Regional Road Directorate for development planning purpose.

	Institutions	Nos. of Divisions/Sections	Concerned Division/Sections/Branch	Concerned Sections/Unit	Role in EA Process /Bridge	Other Roles
					handling agency in case of conflict and dissatisfaction of the affected parties.	
	<b>District Forest Office</b>				<p><i>No direct role in EA process</i> except assisting/providing suggestions to MOFSC/DOF on matters related to forest for allocation of forest area to the development projects.</p> <p>Conduct forest area demarcation for allocation, numbering of trees and implementation of mitigation measures as directed by MOFSC/DOR during project implementation in co-ordination with the developer and sectoral ministry/Departments</p>	Assist and co-ordinate with MOFSC/DOF for the formulation of sectoral and cross –sectoral environmental policies related to forests
	<b>District Survey Office</b>				<p><b>No Direct role during project preparation.</b> It has following role to play during pre-construction phase of implementation.</p> <p>a. Cadastral survey and verification of the affected private land plot measurements if required for the projects</p> <p>b. Function as one of the member of the Compensation Fixation Committee for land and property compensation</p>	
	<b>District Land Revenue Office</b>				<p><b>No Direct role during project preparation.</b> It has following role to play during pre-construction phase of implementation.</p> <p>a. Identification of the land</p>	

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
					<p>owners of the affected lands and verification of land owners.</p> <p>b. Function as one of the member of the Compensation Fixation Committee for land and property compensation</p> <p>c. Land ownership transfer of the affected land in the project name</p>	
	<b>District Administrative Office</b>				<p><b>No Direct role during project preparation.</b> It has following role to play during pre-construction phase of implementation.</p> <p>a. Function as a chair of the Compensation Fixation Committee for land and property compensation</p> <p>b. First Public notification for land acquisition designation of the land owner and land area for acquisition as per land acquisition Act.</p> <p>c. Second Public Notification for land acquisition after verification of cadastral survey, and identification and verification of land owners as per land Acquisition Act.</p> <p>d. Public Notification on the compensation and start date of compensation payments</p> <p>e. Compensation payments to the affected parties</p> <p>f. Acts as first legal tier of Grievance handling and conflict resolution</p>	Maintenance of law and order situation in the project area.
	<b>District Development Committee</b>				<p><b>No Direct role during project preparation.</b> It has following role to play during pre-construction phase</p>	Request the road division office for the incorporation

	<b>Institutions</b>	<b>Nos. of Divisions/Sections</b>	<b>Concerned Division/Sections/Branch</b>	<b>Concerned Sections/Unit</b>	<b>Role in EA Process /Bridge</b>	<b>Other Roles</b>
	<b>Office</b>				of implementation.  a. Function as a member of the Compensation Fixation Committee for land and property acquisition	of new bridge projects in the district for development planning with district prioritization.
<b>Local Level</b>	<b>Village Development Committee/ Municipalities</b>				As per the environment Protection Regulation, recommendation letters from the VDC/municipality of the project implementation area on the project is mandatory which is required along with the IEE/EIA reports while submitting for environmental approval to MOE and MoPPW.	VDCs and Municipalities have the authority in the environmental management of their jurisdiction as per LSGA, 1999.

**Annex-6: Environment and Social Management – Mandates and Responsibilities (Key Institutions)**

Institutions	Mandates and Responsibilities	Practice	Remarks
<p align="center"><b>National Planning Commission</b></p>	<p><i>A. Infrastructure Development Division</i></p> <ul style="list-style-type: none"> <li>i. Formulation of overarching National Policy on environment and social sector</li> <li>ii. Formulation of overarching short term, mid –term, and long term National Plans including transport and bridge</li> <li>iii. Resource sealing and allocation of sectoral Ministries and Departments</li> <li>iv. Monitoring and evaluation of priority projects.</li> </ul> <p>NPC as an apex institution, first prepare the draft of Base/Approach Paper for the forthcoming development plan before formulating the detailed plan document. Initially, the main objective of the plan is fixed and to achieve this objective total and sectoral economic growth rate targets are determined for the plan period. After the completion of the draft Base/Approach Paper it is presented in the meeting of the NDC for suggestions. Then, the NPC revise the Base/Approach Paper according to the suggestions given by the NDC. The detailed plan document is prepared based on this Base/Approach Paper. At the micro level the basic sectoral planning process is under taken by the respective development related ministries based on the plan document. Much of the initial inputs for the sector planning is provided by the implementing ministries/departments which is then reviewed at the NPC.</p>	<p>No direct roles and responsibilities in the EA process. But has role in the formulation of the national policies on environment and social management and streamlining of the various sectoral policies. It plays an important role in the prioritization of the fiscal developments projects including bridge projects. However, National planning commission decision making in practice is highly dependent on influence of political parties and its influential persons rather than the sectoral line agencies in the prioritization of the sectoral projects including transport and bridge. Such practice has a direct bearing on the trustworthiness of the adopted overarching sectoral policies and plans.</p>	<p>Adopted National sectoral policies and plans (short term, mid-term and long term) often are diluted due to undue political interference in the activities of the NPC at the policies and plans at implementation level.</p>
<p align="center"><b>Ministry of Environment (MoE)</b></p>	<p><i>A. Environmental Division</i></p> <ul style="list-style-type: none"> <li>i. Formulation of national environmental policies/guidelines within the framework of overarching national policy on environment issued by National Planning Commission</li> <li>ii. Co-ordination with sectoral ministries /departments for the formulation of sectoral environmental policies/guidelines</li> <li>iii. Co-ordination with the bilateral and multilateral donors on the matters related to environmental matters</li> <li>iv. Formulation of pollution related standards</li> <li>v. Review, public disclosure and approval of EIA reports received from line ministries including MoPPW</li> <li>vi. Environmental audit of the completed projects after 2 years of completion</li> <li>vii. Conduct research and trainings in coordination with the</li> </ul>	<p>Co-ordination with the cross-sectoral ministries, and other stakeholders (NGOs, academia, civil society) in the formulation of environmental policies, standards, guidelines and action plans to combat pollution and enhancement of natural and social environment across development sectors and geographical setting is very weak. Required guidelines on natural and social environment, pollution standards are yet to be developed to mainstream the EA process.</p>	<p>As of the date ministry has confined its role in the EIA document approval in an adhoc basis, and need expanding its role in formulating standards, guidelines and strengthening review process to streamline EA process in addition to conduct or out source to conduct research and training in the environmental sector. Apart from this it has to increase its activities in the</p>



Institutions	Mandates and Responsibilities	Practice	Remarks
	public, private, academia, NGOs, INGOs, and donor agencies	<p>Review of the EIA document though conducted yet has to establish a reliable process and procedures for the improvement of the EIA practice and documentation and maintain a degree of quality including environmental mainstreaming. Existing EIA review process is adhoc and shortfal professional requirements for review and evaluation.</p> <p>Environmental monitoring and environmental auditing of the approved development projects is almost non-existent. As a result, the developer consider EA approval process and procedures as undesired burden/bottleneck to development activites.</p> <p>Particiaption/co-ordination in the environmental research or promotion of such activities is very limited.</p> <p>Trainings on environmental related matters and EA process and procedures to professionals (EA practitioners and the staffs of cross-sector line agencies) is insufficient to mainstream the EA process and procedures as required for effective output.</p>	environmental monitoring and auditing with concrete actions to the non-complying agencies.
<b>Ministry of Physical Planning and Works (MoPPW)</b>	<p>A. <u>Works Division</u></p> <p>i. To formulate proper policies, strategies and action plans for the overall development, expansion and promotion of the roads, bridges, railways and waterways throughout the Kingdom of Nepal, and monitor and supervise implementation aspects.</p> <p>ii. Conduct pre-feasibility studies of various projects, and, based on the feasible projects, formulate a long-term plan, on the advice of, and in consultation with, the Planning, Monitoring</p>	<p><b>No direct roles in EA process.</b> But is involved in the overarching development planning of the bridge and transport. Identify and prioritize bridge projects from the lists of the proposed bridge projects of Department of Roads and forward to the</p>	Environmental screening of the projects right at the pre-feasibility stage of the project would have played a role of environmental mainstreaming

Institutions	Mandates and Responsibilities	Practice	Remarks
	<p>and Evaluation Division, and make arrangements for implementation through implementing bodies.</p> <p>iii. To perform the role of a main coordinator among governmental, non-governmental and private organizations as well as bodies related with the roads, bridges, railways and waterways sector.</p> <p>iv. To render advice to the Ministry on all the technical, financial, social and environmental aspects associated with the roads, bridges, railways and waterways sector.</p> <p>v. To act as the secretariat for any kind of coordination committee formed or to be formed at the national level, related with the roads, bridges, railways and waterways sector.</p> <p><b><u>B. Planning, Monitoring and Evaluation Division</u></b></p> <p>i. Held, review meetings of development projects) run by the Ministry and subordinate bodies in a regular manner.</p> <p>ii. Formulation of sectoral environmental policies in coordination with line sub-ordinate bodies</p> <p>iii. Review and approval of IEE reports with needed revisions with the subordinate line bodies.</p> <p>iv. Review and forwarding of the EIA reports with needed revisions and comments to MOE for approval process.</p> <p>v. Also in consultation with the concerned Divisions, to formulate, or cause to be formulated, such programs as to enhance capability of the employees serving at the Ministry and the subordinate bodies.</p> <p>vi. To render necessary assistance to the Foreign Aid and Quality Standards Division in matters including formulation of projects to be operated with donor agency assistance.</p>	<p>NPC for further action. Conduct or outsource to conduct or direct the Department of Roads to conduct pre-feasibility, and feasibility study of the bridge projects prioritized by the NPC with or without initial environmental screening of the designed project.</p> <p><b>Directly involved in the EA process.</b> It has legal mandate to review and approve the IEE of the bridge project. Besides, it also review and forward the EIA report after incorporation of the comments of MoPPWTM without comments for approval to MOE. MOE may revise the EIA report forwarded by MoPPWTM before approval. Normal practice of the IEE and EIA review is through a review committee involving mostly members from the Ministry, Department of Roads and limited number of professionals from outside. For every project the review committee members are different and may or may not have professional experience of EA process.</p> <p>Its role in the formulation of policies related to sector till date is limited. Coordination with other sectoral agencies in the mainstreaming of the sector related environmental policies is weak.</p>	<p>for subsequent EA process.</p> <p>This division at times is ignorant on whether the projects initiated by the MoPPWTM would require EA process or not. Its role is confined to review and approval of IEE and Review of</p>

Institutions	Mandates and Responsibilities	Practice	Remarks
		<p>On site supervision / monitoring /auditing of the approved projects is almost non-existent.</p>	<p>the EIA reports of the project which are screened out for EA process. It is important that this division should have knowledge on the various projects and their initial environmental screening status initiated by the Ministry and its various line agencies to mainstream the EA process.</p>
<p><b>Ministry of Forests and Soil Conservation (MoFSC)</b></p>	<ol style="list-style-type: none"> <li>i. Formulation of sector specific policies, plans and guidelines on forest, natural environment, and biodiversity</li> <li>ii. Co-ordination and sector inputs with the other line ministries in the formulation of cross –sector environmental policies and guidelines</li> <li>iii. Watershed Environmental impact assessment, monitoring and co-ordination of national priority projects including transport and bridges</li> <li>iv. Preparation of proposals for the award of the forest land area to development projects including transport and bridge for cabinet approval with terms and conditions</li> <li>v. Approval for forest area award to the development projects including transport and bridge after cabinet approval.</li> </ol>	<p><b>It has no direct role in the EA process.</b>  It gets information of the projects only when it is coordinated by the developing agency for the development of project in the national forest areas including National Parks, Wildlife Reserves, and Conservation Areas in the pre-project development phase. There is no legally binding mechanism to provide information to the MOFSC and its line agency on the affect of the project on forest land by the developer. The public notification of IEE and EIA is not acknowledged by the Ministry and its line agencies as officially registered information. Ministry does not take initiative to acquire information on the implication of development projects in the forest area in the project pre-feasibility and feasibility design stage.</p> <p>Though Ministry and its line agency staffs are the part of the review Committee during the IEE and EIA approval, the ministry and its line agency does not regard/acknowledge this as official</p>	<p>A situation of conflict always exists due to poor coordination by the developer as well as by the MOFSC and its line agencies.</p>

Institutions	Mandates and Responsibilities	Practice	Remarks
		<p>information.</p> <p>As of the date, the ministry and its line agencies get the official information of the project impacts only when the developing agency seeks approval for forest land required for the project.</p> <p>The MOFSC is regularly formulating forest policies which have direct implications to the developing projects without any co-ordination with the other sectoral ministries.</p>	
<p><b>Other Sector Ministries (concerned with Transport and Bridge)</b></p>	<ul style="list-style-type: none"> <li>i. Formulation of sectoral policies and plans for sector development</li> <li>ii. Participation and sector inputs in the formulation of cross-sectoral policies on environment</li> <li>iii. Co-ordination with the sector line agencies for the implementation of cross –sector projects including transport and bridges</li> </ul>	<p>Same as that of the Ministry of Forests and Soil Conservation</p>	<p>Same as that of the Ministry of Forests and Soil Conservation</p>
<p><b>Department of Roads</b></p>	<p>A. <b><u>Bridge Unit</u></b></p> <ul style="list-style-type: none"> <li>i. Translate Government policies for the Bridge sub-sector from policy, planning, design , quality and standards and implementation perspectives</li> <li>ii. Conduct or outsources Pre-feasibility studies of SRN bridges and alternative analysis to select environmentally, socially, and financially suitable bridge option in coordination with GESU</li> <li>iii. Conduct or outsource feasibility study of selected option and approve design and cost estimation for implementation in co-ordination with GESU</li> <li>iv. Screening of projects for short-term, mid-term, and long-term bridge development and forward to higher authorities, Ministry for approval.</li> <li>v. Screening of bridge projects for regular and periodic rehabilitation and maintenance and forward to higher authorities, Ministry for approval.</li> <li>vi. Forward approved projects for Contract Document Unit</li> <li>vii. Implementation of bridge projects through itself or forward to the Regional Directorate and Divisions for implementation</li> <li>viii. Regular or periodic supervision and monitoring of construction</li> </ul>	<p>During pre-feasibility and feasibility stage of project preparation, there is very poor pro-active co-ordination with the GESU, an environmental/social wing of the Department of Roads. As a result the pre-feasibility reports are weak in terms of initial environmental screening and site alternatives of the proposed projects to avoid, and minimize the environmental and social impacts and mainstreaming of the EA process and required budgets in the subsequent phases of project preparation.</p> <p>Project supervision by the bridge unit does not give due consideration of environment and social issues nor coordinated with</p>	<p>Co-ordination With GESU is poor both at planning and implementation phase.</p> <p>A minimum level of environmental / social supervision by the bridge unit is needed for all bridge projects</p> <p>Contract bid documents should at least reflect the environmental issues identified</p>

Institutions	Mandates and Responsibilities	Practice	Remarks
	<p>works in co-ordination with GESU.</p> <p><b>B. <u>Development Unit</u></b></p> <p>i. The unit exists, but has no role as other units carry out the functions of the respective sub-sectors.</p> <p><b>C. <u>Contract Document Unit</u></b></p> <p>i. Prepare contract document as per the design document in coordination with GESU</p> <p><b>D. <u>GESU</u></b></p> <p>i. Formulation of sector specific environment/Social policies within the framework of national policies and preparation of sector specific guidelines for environmental and social studies.</p> <p>ii. Participation and sector input in cross sector policies and guidelines.</p> <p>iii. Conduct required trainings and skill enhancement programs on environmental and social safe aspects to the in house staffs; various section staffs of DOR at central, regional and district/local level; consultant communities; developer communities, and contractors.</p> <p>iv. Environmental and social screening of bridge projects as per the EPR provisions for IEE/EIA study undertaking</p> <p>v. Undertaking IEE/EIA study or outsourcing of consultants for IEE/EIA studies as per the EPR provisions</p> <p>vi. Review IEE/EIA as per government sectoral and cross –sectoral guidelines including road sector ESMF and forwarding to MoPPWTM for approval action with revisions</p> <p>vii. Participate in MoPPWTM review process for approval of IEE and forwarding EIA to MOE with revisions</p> <p>viii. Participate in MoE review process for approval of sector EIA study</p> <p>ix. Review of contract bid documents to incorporate the mitigation provisions in the particulars of contract provisions, standards and specifications and bill of quantities</p> <p>x. Periodic supervision and monitoring of the projects during construction and operation phase in matters related to the</p>	<p>GESU.</p> <p>The generalized Contract bid documents approved by the bridge unit in consultation with other Divisions and Units of the Department of Roads does not include specific environmental clauses in Particulars of Contract, Contract Specifications and Bill of Quantities. The existing general provisions are weak and not effective to take into account of the environmental issues to be implemented by the contractor. The mitigation costs and monitoring costs incorporated in IEE and EIA documents in the EMP are not reflected in the contract bid.</p> <p><b>No Role</b></p> <p>The unit exists, but has no role as other units carry out the functions of the respective sub-sectors</p> <p>The sectoral policies, guidelines, and frameworks so far developed are guided by the donors and are of project specific nature and does not encompass the sector requirement whether requiring EA or not.</p> <p>The training and skill enhancement programs of the unit are also guided by the donors and are not the regular part of the Unit program.</p> <p>GESU function as the primary unit of the</p>	<p>by IEE/EIA to be addressed by the contractors along with the costs in the Particular Conditions of contract, Contract specifications and Bill of Quantities.</p> <p>-</p> <p>-</p> <p>GESU should develop an overarching guideline for environmental and social studies for projects requiring EA or not and enforce for all projects in the project</p>

Institutions	Mandates and Responsibilities	Practice	Remarks
	<p>compliance of environment and social aspects</p> <p>xi. Documentation of project environmental and social aspects from project planning to construction completion and operation of projects</p> <p>xii. Public disclosure of the IEE/EIA studies for general public, academia, NGOs, Donor communities.</p>	<p>Department of Roads for the environmental/social screening of projects for EA process. However, for the bridge projects as per EPR and the Nepal Bridge Standard 2067, the screening is not complied.</p> <p>Review of IEE/EIA is a regular part of the GESU for EA processing for approval; however, the review process is adhoc.</p> <p>The contract bid documents for bridge development are not reviewed by the GESU for incorporation of environmental clauses in the Particulars of Contract, Contract Specifications, and Bill of Quantities.</p> <p>Periodic supervision and monitoring of the sector development projects for environmental and social compliance is inadequate and weak.</p> <p>Proactive co-ordination with the other divisions and units of Department of Roads is inadequate.</p>	<p>preparation cycle (pre-feasibility and feasibility stage)</p> <p>Training and skill enhancement of GESU and other units of the Department of Roads should be developed as a regular program of the GESU and fiscal budget allocation should be made accordingly.</p> <p>IEE/EIA review process at GESU should be strengthened to ensure professional quality inputs.</p> <p>A format for the incorporation of the environmental clauses should be developed within the framework of the existing Contract Bid Documents to reflect the findings of environmental studies and mitigation costs of the project.</p> <p>Supervision and monitoring role of the GESU need to be expanded for the compliance of environmental and social requirements of the projects.</p>

Institutions	Mandates and Responsibilities	Practice	Remarks
			GESU should initiate a pro-active co-ordination with various divisions and units of the Department of Roads during project preparation phase and implementation phase.
<p><b>District Line Agencies (concerned with compensation determination and payment as well as grievance hearing)</b></p>	<p><u><i>District Administration Office, District Land Revenue Office and District Survey Office</i></u></p> <p>The District Line Agencies together with the Project Office has the following key responsibilities and mandates:</p> <ul style="list-style-type: none"> <li>i) Formation of the Compensation Determination Committee (CDC) as per the Land Acquisition Act 1977.</li> <li>ii) Issues notice of preliminary action and affix it in proper places for information</li> <li>iii) Review Project Manager's documents on compensation for losses</li> <li>iv) Publish land acquisition notice to be publicly displaced at different places</li> <li>v) Information to land owners who may not become aware of the notice</li> <li>vi) CDC to determine the compensation considering: i) current price of land ii) value of standing crops, house, walls sheds and other properties</li> <li>vii) CDO prepares list of persons entitled to compensation and issues notice of the same</li> <li>viii) GON takes possession of concerned land and hands it over to concerned office</li> <li>ix) CDO notifies the amount of compensation payment to the owners</li> <li>x) Project Manager (PM) pays the compensation to respective owners</li> <li>xi) The PM obtains land ownership certificate and transfer ownership to project from individual with support of DLRO/ DSO.</li> </ul>	<p><b>Although there is direct involvement of the concerned offices for compensation as stated by Act the following practices seem to be common.</b></p> <p>Compensations are based on GON norms and do not necessarily represent replacement value.</p> <p>Compensations for structures are paid in installment basis.</p> <p>Non title holders (squatters/ encroachers) are not compensated for their assets.</p> <p>There are R&amp;R assistances/ other allowances to the affected people.</p> <p>Grievance hearing mechanism does not often work systematically. It just simply receives the complaints filed by the land owners who are not satisfied with the compensation rates.</p>	<p>Required lands are often taken in donations for bridge projects.</p> <p>The affected people/ communities are hardly consulted during planning and design stage which often invites serious disputes at the later stage after the completion of bridge projects.</p> <p>Other social issues (employment, income, local culture, values etc) of communities/ people are not paid attention which afterward leads to disputes/ conflicts.</p> <p>The benefits of bridge projects are often realized by outsiders whereas the locals often happen to be the victims only.</p>

*Note: The line agencies under Department of Roads carryout functions as directed by the Divisions and Units of Department of Roads. The Road division involved in the implementation of the bridge projects (contract bidding process, and construction supervision) has roles in the project supervision and monitoring including environmental and social issues of the project in co-ordination with GESU. As GESU is a central level line agency, there is gap in co-ordination at project to project level. Obviously, front line monitoring of the project in matters related to environment and social aspect is poor and grossly inadequate.*

The line agency of the other sectoral ministries is to carryout functions as directed by the Ministry. During implementation, the district/local level line agencies as a role to co-ordinate the developer to facilitate the project development works vis a vis maintain environmental and social harmony of the project development area as required.

### **Annex 7: Resources Available**

#### **A. Financial Resource**

Institution	Fiscal year 1967/68		Fiscal year 1968/69		Fiscal year 1969/70 (projected)	
	Administration	Development	Administration	Development	Administration	Development
Ministry of Environment	50544	-	53740	-	54590	-
Environment Division	150 <sup>75</sup>					
Ministry of Physical Planning and Works	46683	-	143566 <sup>76</sup>		151140	
Department of Roads	85204		85360		89533	
Regional Directorate	22490		22315		24058	
Road Division	189521		210800		219908	
Monitoring and Evaluation <sup>77</sup>	1500		2910		-	
Bridge Unit		2178501		3150000 <sup>78</sup>		3727000
GESU			3000 <sup>79</sup>			

Note: All figures are in Thousand Nepali Rupees based on the Yearly Development Program ( Fiscal Year 2068/2069), National Planning Commission.

<sup>75</sup> Programs for stakeholder interactions other than the regular administration (Salary/ supplies)

<sup>76</sup> Government of Nepal contribution 45475 and Foreign loan 98091

<sup>77</sup> Includes some part of costs of GESU

<sup>78</sup> Government Nepal Contribution 1810000 and foreign grants 710000

<sup>79</sup> For the outsourcing of IEE/EIA study of all the projects of Department of Roads, Apart from this GESU also gets funds from the specific projects of DOR for IEE/EIA study based on discussion with Mr. Purna Shiddhilal Shrestha, GESU Chief, DOR



## B. Human Resource

Institutions	Total HR	THR	NTHR	Work Load	Remarks
Ministry of Environment	53	13	40	All works and functions of the Ministry of environment	
Environmental Division	6	4	2	Processing of works related to Environment Division including Environment section	
Environmental Section	5	4	1	<sup>80</sup> Review of EIA scoping and TOR , approval of TOR, Review and approval of EIA from all sectoral ministries (nearly 40 EIAs are approved in a fiscal year, approximately 250 EIAs are currently under process)	The backlog of over 250 EIA reports pending for approval reveals that the section is highly under pressure. With the current rate of approval about 40 project a year, it will take about 6 additional years to complete the EIA approval of the existing backlogs. Obviously the human resource in the environmental section of MOE is highly inadequate.
Ministry of Physical Planning ,Works and Transport Management	141	23	118	All works and function of the MoPPWTM	
Planning Monitoring and Evaluation for IEE review and approval and EIA review at the MoPPW	1	1	-	<sup>81</sup> Review of IEE TOR and review and approval of IEE; Review of EIA scoping and TOR , and, Review of EIA related to transport, bridge, water supply, buildings, etc and forwarding to MOE for approval (more than 100 projects are under process now)	Only one person to process the IEE and EIA reports originating from the line agencies of MoPPW. As a result MoPPWTM has omitted to review the TOR of IEE projects which has a direct relvance to the screening of issues for IEE studies and quality of the IEE reports based on the TOR approved without review process.
Department of Roads (including Regional Directorate and Road Division)	2610	2300	310	All works and function of the DOR including road and bridge development initiated by DOR	
Bridge Unit at the DOR	24	15	9	<sup>82</sup> Pre-feasibility, feasibility study of the bridge (35 new bridges are under design; 350 bridges are under construction now; 50	Considering the workload in the bridge unit, the working technical staff in the project is inadequate. Further lack of special training

<sup>80</sup> Based on the discussions with Mr. Ashok Bhattarai, Section Cheif, Environment Section, MOE

<sup>81</sup> Based on the discussion with Mr. Bidhya Nath Bhattarai, Desk officer, Environment, MoPPWTM

<sup>82</sup> Based on the discussions with Mr. Kritya Nath Thakur, Unit Chief, Bridge Unit, DOR

Institutions	Total HR	THR	NTHR	Work Load	Remarks
				to 60 bridges construction is completed each year; 70 to 80 new bridges are taken up for construction each year, 12 to 1300 bridges currently require maintenance), model contract documents (for all bridge projects), and implementation supervision/monitoring of centrally implemented projects (3 projects). Supervision and monitoring of the projects implemented by Regional Directorate and Road Divisions (more than 350 under construction bridges)	related to bridge design to the staffs of the unit, the unit has to entirely depend on outsourcing of the consultants for design as well as review of the design.  As the unit also directly supervise the central level projects (3), supervisory functions of the unit for the bridge construction and maintenance projects at road division level is grossly inadequate for the quality construction and maintenance.
GESU at DOR	6	4 <sup>83</sup>	2	<sup>84</sup> Environmental screening of all projects initiated by DOR; Conduction or outsourcing for conduction of EA (2068/69 alone has 23 packages of IEE/EIA for new roads); Review of Scoping Documents, TOR, IEE and EIA reports and forwarding to MoPPWTM for approval processing (About 50 IEE/EIA are under process currently); Supervision and monitoring of the projects under implementation by DOR (249 district roads and 297 regional roads, bridges are additional workloads)	GESU has multiple roles and responsibilities starting from the environmental screening of the approved projects, outsourcing of consultants for conduction of IEE/EIA, review of IEE/EIAs, preparation of guidelines, policies related to the sector, and supervision and monitoring of the ongoing construction works. The existing permanent technical staff (2) is grossly inadequate to carry out the functions as required.  For this reason, GESU has not been able to perform monitoring works of the ongoing projects and is mostly concentrated in the environmental screening and review of IEE/EIA works
Regional Directorate *	8	3	5	<sup>85</sup> Many staff on the lists, but hardly few are present in the office. There is not much workload to the regional directorate. Most of the time staffs of the regional directorate	

<sup>83</sup> Two of the technical persons are outsourced as consultant for RSDP.

<sup>84</sup> Based on the discussion with Mr. Purna Shiddhilal Shrestha, Unit Chief, GESU, DOR

<sup>85</sup> Based on the discussion with Mr Ramesh Poudel, Engineer, Road Division, Kaski

<b>Institutions</b>	<b>Total HR</b>	<b>THR</b>	<b>NTHR</b>	<b>Work Load</b>	<b>Remarks</b>
				are at the central office.	
Road Division**	24	18	6	<sup>86</sup> Total project handled by the division is 50 (district road 16, urban road 14, Toourist road 4, Regional level roads 3, bridges 12, Chepang Marga 1) excluding the regular maintenance and rehabilitation works of roads and bridges.	With the current level of staff it appears that one technical person has to supervise nearly 3 projects at a time. Further the projects are located at wide apart areas. Obviously, the supervision of the works by the appointed technical staff is inadequate to maintain the quality works.

Note: HR = Human Resource; THR = Technical Human Resource; NTRH = None Technical Human Resource ; \* Case example of Regional Directorate, Western Region; \*\* Case example of Road Division Bharatpur

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<sup>86</sup> Based on discussion with Mr. Birendra Mandal, Engineer, Raod Division, Bharatpur

**Annex 8: Summary of ESSA Consultations April 2012**

**Nepal Bridge Improvement and Maintenance Program - Program for Results**

**Kathmandu Consultation, Yak and Yeti Hotel, April 23, 2012**

**Agenda:** See file below

**Participants:**

**Main Points of Discussion:**

**General PforR and BIMPS Presentations**

Budget Allocation from PforR

*Question:* Is the 25% advance for PforR funding available within the next budget year to fill DoR budget gap for this year? Can it be used for the LRN (Local Road Network) backlog?

*Response:* PforR advance will go into MoF account and will be up to the Ministry to determine how it will be allocated. The LRN is a separate budgeting item and not part of the PforR program.

*Question:* Will this Program include technical assistance for capacity building from the USD \$60 million budget?

*Response:* Task Team is in the process of locating another USD\$3 million over the 6 year program for capacity building. The Government of Nepal is expected to contribute 5% of the total program budget.

Reporting and Supervision in PforR

*Question:* Are the reporting and supervision arrangements similar to those from Investment Lending?

*Response:* Yes, the systems will be very similar. Reporting every 6 months, FM reporting every trimester. Reporting will include fraud and corruption review/updates.

Disbursement Linked Indicators

*Question:* Will the DLIs be reevaluated every 6 months?

*Response:* No, DLIs will be reevaluated annually.

*Question:* Will the DLIs be weighed equally? Some seem more tangible than others.

*Response:* No, the DLIs will not necessarily be weighted equally; the emphasis will be on DLIs 1-3.

*Question:* If DLIs are mostly accomplished except for a minor component will the Client receive the disbursement?

*Response:* The DLIs are negotiated and agreed upon between the Client and Bank. If the DLIs are fully met the disbursement will be made. If not complete, the disbursement is not made.

*Question:* Will there be a DLI on environmental and social management?

*Response:* The best approach is to establish a system of auditing to ensure the environmental and social systems and being applied appropriately and robust enough to address any issues which may need remedy. Not recommended to include E/S management as a DLI.

## **Environmental and Social Systems Assessment for BIMPS Presentations**

### OP 9.00 Standards

*Question:* How will the gaps be addressed to meet the new environmental and social standards under OP 9.00?

*Response:* The ESMF which has been prepared in 2007 and adopted by the Nepalese government for roads should be updated and upgraded the Department level to cover both road and bridge activities.

### Project Screening

*Comment:* DoR conducts initial project screening and then GESU screens

### Alternative Analysis

*Comment:* Depending on the type of bridge alternative analysis can be conducted and different impacts can be assessed. However, often times these impacts and alternatives are more relative to the road segment than the bridge itself.

### Free, Prior and Informed Consultation:

*Question:* If the locations of the bridges are not yet known how does this affect the FPIC requirement?

*Response:* Increased access through bridge development is in high demand to directly address community needs. At the same time, there is the expectation that the Client will meet any international treaties and obligations to which they have committed (i.e. ILO 169). There is no difference in the FPIC requirements between IL and PforR and it is expected that no Bank-financed activities will make people worse off.

### Compensation for Land Acquisition and Compensation for illegal inhabitants

*Question:* How will compensation for and land acquisition be handled and what is provided to those who are on the land without formal legal status?

*Response:* In the Land Acquisition Act inhabitants without land tenure are not specifically addressed, however this is covered by the ESMF. Compensation is paid for any land which is legally acquired from the land owner. Any inhabitants without legal recognition who are displaced by program activities are assisted for livelihood restoration, as per the ESMF. Overall, land acquisition and resettlement as a result

of the BIMPs program is expected to be minimal and manageable. Cash compensation is expected to be given to those who are affected.

#### Environmental and Social Review throughout Program activities

*Question:* What steps will be taken for environmental and social reviews throughout the Program? There is a need for more staff and resources to complete this work. Will some type of guidance checklist be provided to support these review activities?

*Response:* The development of a checklist to conduct supervision and environmental and social reviews would be beneficial. Increased staffing will depend upon the needs of the department.

#### Role of GESU

*Comment:* GESU currently lacks the capacity and facilities to fully engage in road and bridge works. Increased incentives for government staff may motivate GESU. The ESMF should be revised to clarify the role of GESU as it is currently somewhat unclear. If GESU is involved in the design of activities then GESU should also be included for clearance of proposed activities.

## Pokhara Consultation, Shangri-La Village Pokhara, April 25, 2012

**Agenda:** See file below

### **Participants:**

Main Points of the Discussion. Many of the points made were suggestions which did not require responses.

*Comment:* What is the experience PforR implementation - success or failure? Is this instrument only for the Bridges or for other sectors/projects? Is there any other countries who've had experience? What World Bank's own assessment of its investment in Nepal – is it successful and giving desired result, is there any formal assessment of the overall WB investment and results? What are the lessons learned?

*Response:* This is new instrument. There are ten projects under preparation around world. Nepal Bridge Project is one of the front runners. So, no implementation experience yet. Not aware of formal World Bank wide portfolio assessment of its investment and success/ failure. However, each investment, at the end would have Completion Review, which records lessons.

*Comment:* Program for Result is not really new; the concept has been around for some time. What is the real difference than in the past (it may be 'the old wine in new bottle')?

*Response:* The main difference in the World Bank operation is that rely on country system, payment made based on the result (through DLI) and Bank will not review each transaction.

*Comment:* Bridges have lots of benefit to the people by way of increasing/ improving access. The bridge planning and selection process, however, may not truly reflect where more and needy people will benefit. The social assessment tends to focus on the negative or adverse impacts, need to consider benefits as well, particularly during bridge selection. There are lots of bridges not constructed where there is real need and demand, and there are bridges constructed because certain group has access and influence to power and decision-makers. Social and environmental assessment should not be another excuse to deprive bridges in the needy area. Bridge planning and implementation needs to be free from such interest group.

*Response:* Government, under this program, will use rational planning and prioritization for planning and selection of bridge. This will include assessment of needs, and demands. Emphasis is on developing and using a system.

*Comment:* The bridges are part of road. Environmental and social impacts of these bridges, which will be constructed to connect existing road on both sides of river/stream, are not likely to be really significant. Consideration to environmental impacts would be more relevant while planning roads, rather than in bridge. Focus should be more on the technical soundness/ technical viability rather than on social or environmental issues.

*Response:* There would be technical assessment also. Today's workshop is on the social and environmental system assessment and findings.

*Comment:* Environmental sustainability is a long-term subject. Impacts may be seen only several years after completion of construction, and operation. So, it is desirable to have longer-term view than just thinking of construction period.

*Response:* Agreed, longer term view is necessary. That is one of the reason to use country system (and support strengthening country system) so that such issues are taken care of even after the external support ends.

*Comment:* Not considering environment could be risky for the bridge as well, such as floods and landslides (Nepal has examples of this). There are good practices, such as bioengineering, that will ensure protection and sustainability of bridge. In some situation, bridge could be built in such a way that it promotes environmental value, e.g. it could provide a new passage for wildlife and help their movement. The height of the bridge could be an important consideration, in some cases, to facilitate wildlife movement. Such consideration is particularly important in the context of emerging landscape environmental conservation/management concept. However, early environmental consideration and coordination with relevant stakeholder is needed to be useful and add value.

*Comment:* The proposed Bridge Program is for Strategic Roads. Does this mean World Bank will not fund bridges on local roads? The greatest demand for the bridge is on the Local Roads.

*Response:* This happens to be first program of support under the PforR instrument in Nepal. This does not exclude other program development under the same instrument or other existing instruments.

*Comment:* How the resources for new construction and completion of ongoing bridges will be assured? World Bank finance will come only after there is result (which mean completion of bridge). Will there be verification or third party audit? World Bank procedures for releasing the money are very lengthy – this needs to be simplified and shortened.

*Response:* About 25% would be transferred to government as an advance. As and when results are verified, the amount will be transferred. Bank will not be requiring the use of Bank procedure – it will be government system.

*Comment:* Consideration to local social issues is important. There are examples in Nepal, in which project did very well as a contribution towards Nation's economic development or national needs but it was not very healthy for the community/local people (they were/are the suffer only). Hence, consideration to social aspects, local concerns and benefits should be included or given priority in the project.

*Comment:* Fixation of land value and compensation payment is one of the important issues. Though there is Land Acquisition Act, there is no regulation. We really need a sound guideline on this – value of land depends on location and changes with time. The value needs to be fixed accordingly.

*Comment:* During implementation, issues related to wages, payment to worker, employment opportunity, and health including HIV/AIDS etc often comes up. These needs to be thought well during planning and managed during construction.



# Consultation Workshop

## Environmental and Social Systems Assessment for Nepal Bridges Improvement and Maintenance Program Support

Hotel Yak and Yeti  
Kathmandu, Nepal  
April 23, 2012

Time	Sessions	Speaker
12:15pm	Registration	-
12:30pm – 1:10pm	Lunch	-
1:10pm	Welcome address	<ul style="list-style-type: none"> <li>• Mr. Farhad Ahmed, Sr. Transport Specialist, World Bank</li> <li>• Mr. Yogendra K. Rai, DDG, FCB, DOR</li> </ul>
1.10pm-1.30pm	Introduction on World Bank new lending instrument – Program for Results (PforR)	<ul style="list-style-type: none"> <li>• Mr. Glenn Morgan, Regional Safeguard Advisor, World Bank</li> </ul>
1:30pm-1:50pm	Introduction on the Proposed Bridges Improvement and Maintenance Program Support	<ul style="list-style-type: none"> <li>• Mr. Farhad Ahmed, Senior Transport Specialist, World Bank</li> <li>• Mr. Deepak Shrestha, Senior Transport Specialist, World Bank</li> </ul>
1.50pm-2.20pm	Questions and answers	-
2:20pm-2:40pm	Tea and coffee break	-
2:40pm-3:30pm	Presentation on “Assessment of Nepal Country System in Managing Environmental And Social Impacts Associated with Bridge Programs”	<ul style="list-style-type: none"> <li>• Mr. Chaohua Zhang, Lead Social Development Specialist, World Bank</li> <li>• Mr. Drona Ghimire, Environmental Specialist, World Bank</li> </ul>
3:30pm-4:30pm	Questions and answers	-
4.30pm	Closing	<ul style="list-style-type: none"> <li>• Mr. Farhad Ahmed, Senior Transport Specialist</li> <li>• Mr. Yogendra K. Rai, DDG, FCB, DOR</li> </ul>

# Consultation Workshop

## Environmental and Social Systems Assessment for Nepal Bridges Improvement and Maintenance Program Support

Shangri-la Village Resort  
Pokhara, Nepal  
April 25, 2012

Time	Sessions	Speaker
12:15pm	Registration	-
12:30pm – 1:10pm	Lunch	-
1:10pm	Welcome address	<ul style="list-style-type: none"> <li>• Mr. Farhad Ahmed, Sr. Transport Specialist, World Bank</li> <li>• Mr. Yogendra K. Rai, DDG, FCB, DOR</li> </ul>
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